

ACCU-CHEK® Aviva Combo



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00048009694/D-0512



ACCU-CHEK® Aviva Combo

BLOOD GLUCOSE METER

Standard Owner's Booklet



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Introduction

Whether the Accu-Chek Aviva Combo Meter is your first blood glucose meter or you have used a meter for some time, please take the time to read the Getting Started Guide, the Standard Owner's Booklet, and the Advanced Owner's Booklet carefully before you use your new meter. To use it correctly and dependably, you need to understand its operation, screen displays, and all individual features.

Your new meter includes three booklets:

- **Getting Started Guide:**
Use this booklet to set up the meter.
- **Standard Owner's Booklet:**
Use this booklet for instructions on how to operate the standard features of the meter.
- **Advanced Owner's Booklet:**
Use this booklet for instructions on how to operate the advanced features of the meter.

Should you have any questions, please contact one of our customer support and service centres. A listing is at the back of this booklet.

This booklet includes information about:

- Understanding your new Accu-Chek Aviva Combo System
- Testing your blood glucose
- Control testing
- Managing your data
- Changing the meter settings
- Understanding the icons, reminders, warnings, and errors
- Care and maintenance
- Troubleshooting
- Technical information

The Accu-Chek Aviva Combo System

The Accu-Chek Aviva Combo Meter is for quantitative blood glucose testing using Accu-Chek Aviva Test Strips. The meter has many features including:

- Controlling your Accu-Chek Spirit Combo Pump
- Administering a bolus
- Bolus advice
- Daily time blocks that can be adjusted to fit your lifestyle
- Data management
- Data transfer
- Date reminders
- bG test reminders: Alarm clock, Target bG levels, and Health events
- An electronic diary that allows you to enter meal time, carbs, health, and bolus information with your blood glucose test results

For detailed information about the features of the meter, see Chapter 1, “Understanding Your New System.”

 **NOTE**

Blood glucose and bG are interchangeable and mean the same thing.

Intended Use

The Accu-Chek Aviva Combo blood glucose monitoring system is intended for the quantitative measurement of blood glucose. The Accu-Chek Aviva Combo System is intended for self-testing outside the body (in vitro diagnostic use) by people with diabetes and/or by professionals in a clinical setting as an aid to effective diabetes management.

The Accu-Chek Aviva Combo Meter can also be used to interface with and remotely control compatible Accu-Chek insulin infusion pumps via *Bluetooth* wireless technology (radio frequency communication).

The Accu-Chek Aviva Combo Meter is also indicated for the management of diabetes by calculating an insulin dose or carbohydrate intake based on user-entered data.

Suitable for self-testing

The system includes:

- **Accu-Chek Aviva Combo Meter with three AAA batteries (already inserted)**
- **Accu-Chek Aviva Test Strips and pre-inserted activation chip**
- **Accu-Chek Aviva Control Solution**

WARNING

- Any object coming into contact with human blood is a potential source of infection (see: Clinical and Laboratory Standards Institute: Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline – Third Edition; CLSI document M29-A3, 2005).
- Choking hazard. Small parts. Keep away from children under the age of 3 years.

Why Regular Blood Glucose Testing Is Important

Testing your blood glucose regularly can make a big difference in how you manage your diabetes every day. We have made it as simple as possible.

Important Information About Your New Meter

- The meter is designed for testing fresh whole blood samples (for example, blood from your fingertip or forearm). The meter is for outside the body (in vitro) use. It should not be used to diagnose diabetes.
- This meter requires Accu-Chek Aviva Test Strips. Other test strips will give inaccurate results.
- The meter comes with the time and date preset. You may need to change the time to your time zone.
- If you have followed the steps in this booklet but still have symptoms that do not seem to match your test results, or if you have questions, talk to your healthcare professional.

1

Understanding Your New System

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1.1 Overview

Your new meter has several features to assist you in managing your diabetes. It is important you understand the features and how to operate the meter correctly.

NOTE

- This booklet shows sample screens. The screens in this booklet may look slightly different from the screens on the meter. If you have any questions about the meter screens, contact Roche.
- On the meter display, the activation chip is referred to as a code key. Code key and activation chip are interchangeable and mean the same thing.
- Blood glucose and bG are interchangeable and mean the same thing.

1.2 The Accu-Chek Aviva Combo Meter at a Glance

Display

Shows menus, results, messages, and data stored in the diary

Buttons

Press to enter menus or the diary, adjust settings, and scroll through results

Left/Right Soft Keys

Press to select the menu or option above the key

Power On/Off Button

Press to turn the meter on or off

Test Strip Slot

Insert golden end of test strip here



Infrared (IR) Window

Transfers data from the meter to a computer

Activation Chip Slot

Activation chip is pre-inserted here

Battery Door

Remove the battery door by pushing the tab and pulling up the door



Batteries

Insert batteries according to the + and - symbols in the battery compartment.



Control Solution Bottle

(for example)



Test Strip Container

(for example)



Test Strip

Yellow Window -
Touch blood drop or
control solution here.

Golden End -
Insert this end of the test
strip into the meter.



Top View

Infrared (IR) Window



Activation Chip

(for example)



Side View

Pre-inserted activation chip

i **NOTE**

Your meter is already coded and comes with a pre-inserted **black** activation chip that you never need to change. Even if you use test strips from boxes that contain another activation chip that is a different color or has different numbers, you never need to change the **black** activation chip again.

The meter has seven buttons and two soft keys.



NOTE

- You hear a sound every time an active button/soft key is pressed unless you turned off the key sound.
- Press ① or insert a test strip to turn on the meter. If the meter displays the Time/Date screen, make the necessary changes and select Save.

Table of Buttons and Soft Keys

Button	Name	Function
	Left Arrow	► Move or scroll to the left in a screen.
	Right Arrow	► Move or scroll to the right in a screen.
	Up Arrow	► Move or scroll up in a screen.
	Down Arrow	► Move or scroll down in a screen.
	Left Soft Key	► Select the option above the key on the display.
	Right Soft Key	► Select the option above the key on the display.
	Enter	► Select a menu or option. ► Save changes and exit the entry field.
	Backlight	► Adjust the backlight level (low, medium, high). ► Turn <i>Bluetooth</i> wireless technology on and off (press and hold  in the BLUETOOTH screen).
	Power On/Off	► Turn the meter on and off.

Table of Button Combinations

Button Combination	Name	Function
When the buttons are locked, press and hold  and  until the Main Menu appears.	Unlock Keys	▶ Unlocks the buttons.
With the meter turned off, press and hold  and then press  .	Meter/Pump Pairing	▶ Begins meter and pump pairing.

1.3 The Accu-Chek Spirit Combo Insulin Pump at a Glance

Menu Key

Cycles through menus, functions, and information screens

OK Key

Selects current settings displayed on screen, saves changes, exits a screen, and allows the user to view the QUICK INFO screen

Display

Shows menus, messages, and data stored in the pump memory



Cartridge

Holds insulin

Adapter

Connects the cartridge to the infusion set

Up Key

Moves forward in an information screen, increases a setting, turns on the backlight, programmes a Quick Bolus, cancels a Quick Bolus, and turns off the STOP-Warning

Down Key

Moves backward in an information screen, decreases a setting, programmes a Quick Bolus, cancels a Quick Bolus, and turns off the STOP-Warning

Infusion Set

Connects the pump to your body to deliver insulin

For information about the pump, see the Accu-Chek Spirit Combo Insulin Pump User Guide.

1.4 Summary of Features

Display

The meter has a full-colour graphic LCD (Liquid Crystal Display) that displays current and historical information.

Backlight

- The backlight helps you read the information on the meter display under different lighting conditions.
- When the meter is turned on, the backlight is set to the medium level.
- Adjust the backlight level by pressing and releasing the backlight button.
- The backlight adjusts from low, to medium, to high, and back to low again.
- If set to the medium or high level and the buttons are not pressed for about 15 seconds, the backlight returns to the low level to save power.
- When the meter returns to the low level, pressing any button restores the previous backlight level.
- For more information about backlight settings, see Chapter 5, “Changing Meter Settings.”
- For more about power-saving tips, see Chapter 7, “Care and Maintenance.”

Key Lock

- The key lock feature allows you to lock all of the buttons on the meter, except for the power on/off button.
- The key lock serves as a safety measure against unintentional activation of meter functions.
- For more information, see Chapter 5, “Changing Meter Settings.”

Signal Settings

- The meter communicates reminders, warnings, and errors using sounds and vibrations.
- For more information, see Chapter 6, “Icons, Reminders, Warnings, and Errors.”

Blood Glucose Test

Your new meter allows you to enter detailed information for each blood glucose test to include:

- Meal time (pre-meal, post-meal, bedtime, or other)
- Carbs (the amount of carbohydrates you are intending to eat)
- Health events (fasting, exercise 1, stress, illness, exercise 2, or premenstrual).

If bolus advice is set up on the meter and the meter recently communicated with the pump, the amount of active insulin is displayed on the detailed bG Result screen.

Bolus Advice (Optional)

- The term “bolus” refers to the delivery of insulin all at once rather than slowly throughout the day, usually used to compensate for meals or high blood glucose.
- Bolus advice calculates a bolus for you that is adapted to the time of day and your changing situations.
- This function is activated only if you set up bolus advice on the meter.
- For instructions on how to set up bolus advice, see Chapter 5, “Changing Meter Settings.”

WARNING

Before setting up bolus advice, it is very important to read all of the safety information in the Advanced Owner’s Booklet.

Using the Meter with the Pump

- The meter can communicate with and remotely control your pump.
- Pump information is automatically downloaded to the meter when *Bluetooth* wireless technology is activated.
- The meter must be paired with the pump.
- For more information, see the Advanced Owner’s Booklet.

Administering a Bolus

Using your new meter, you can deliver a bolus:

- Remotely on your pump using *Bluetooth* wireless technology
- Using the bolus advice feature on the meter
- Independently on your pump
- Using an insulin pen or syringe

My Data

- Your new meter stores 1,000 records in the diary.
- You can view, modify, or add information to your diary.
- You can view blood glucose test averages, trends, standard day, standard week, and target tables and graphs of the data in the diary.
- You can view the data in graph or table format for the last 7, 14, 30, 60, or 90 days.
- For more information, see Chapter 4, “Managing Your Data.”

Data Transfer

- You can transfer your data stored on the meter to a computer.
- For more information, see Chapter 4, “Managing Your Data.”

Warning Limits for Hyper and Hypo Blood Glucose Levels

- You can select hyper (high) and hypo (low) blood glucose limits that best fit your needs. Whenever a blood glucose test result is above or below this range, the meter displays a warning.
- In addition, Trend Graph screens indicate the hypo warning limit when displaying your blood glucose test results. For more information, see Chapter 4, “Managing Your Data.”
- The meter has default warning limits that can be adjusted. For more information, see Chapter 5, “Changing Meter Settings.”

Time Blocks

- Time blocks allow you to divide a day into different time periods.
- Setting time blocks to fit your own schedule helps you and your healthcare professional see how patterns in your blood glucose are affected by your daily activities and lifestyle.
- Time blocks can be set up with or without bolus advice.
- Talk to your healthcare professional about the best way to set up your time blocks to assist you in managing your diabetes.
- The meter has five default time blocks.
- You may set up to eight time blocks.
- For more information, see Chapter 5, “Changing Meter Settings.”

Without bolus advice, you need to consider the following when setting up time blocks:

- Determine the appropriate time range by reviewing the end time for each time block.
- Review the acceptable blood glucose target range (low and high) for each time block.

With bolus advice, you need to consider the following when setting up time blocks:

- Determine the appropriate time range by reviewing the end time for each time block.
- Review the acceptable blood glucose target range (low and high) for each time block.
- Determine your carb ratio (the amount of insulin needed to cover a given amount of carbohydrates) for each time block.
- Determine your insulin sensitivity (the amount of insulin needed to lower your blood glucose by a given amount) for each time block.

Health Events

Health events can be selected to indicate how you are feeling or what you are doing that might affect your diabetes. The meter allows you the option of setting a percentage for each health event if you set up bolus advice.

Health events available on the meter are:

- Fasting
- Exercise 1
- Stress
- Illness
- Exercise 2
- Premenstrual

Fasting does not scale bolus advice calculations and is not adjustable. Discuss the appropriate percentage for each health event with your healthcare professional. For instructions on how to set up bolus advice, see Chapter 5, “Changing Meter Settings.”

Blood Glucose Test Reminders (Optional)

The meter can be set up to remind you to retest your blood glucose after a high blood glucose test result, after a low blood glucose test result, or after a meal.

An after high blood glucose test reminder example:

- The meter is set up with a high bG threshold level of 13.3 mmol/L and with a reminder time of 60 minutes.
- You have a blood glucose test result higher than 13.3 mmol/L, perhaps 15.0 mmol/L.
- In 60 minutes, the meter reminds you to perform another blood glucose test.

The after meal bG test reminder is set up with a carb value and occurs when the carb value exceeds the snack size. Any of these blood glucose test reminders can be turned on or off individually, as needed. For more information, see Chapter 5, “Changing Meter Settings.”

Alarm Clock Reminders

- The meter has alarm clock reminders which can be used as a helpful way to remind you when to test throughout the day.
- In addition to “bG Test,” you can set reminders for “Other” for any other daily reminder.
- You can set up to eight reminders per day.
- For more information, see Chapter 5, “Changing Meter Settings.”

Date Reminders

- The meter can be set up to remind you of upcoming appointments or dates, such as a “Dr. Visit,” a “Lab Test,” or an “Infusion Set Change.”
- For more information, see Chapter 5, “Changing Meter Settings.”

1.5 Screen Content and Navigation

This section provides an explanation of how to understand and navigate the screens on the meter.



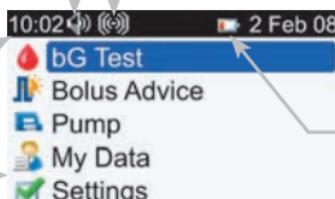
Each time the meter is turned on, this splash screen (Accu-Chek logo screen) is displayed for a short period of time.

Features on the Main Menu:

Sound Icon

Appears when the beeper is turned on

Time



Vibrate Icon

Appears when vibrate is turned on

Date

Low Battery Icon

Appears when the meter batteries are low

Bluetooth/Wireless Technology Icon

Indicates whether the *Bluetooth* wireless technology is on, off, or connecting



NOTE

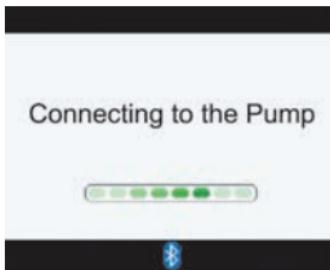
- To select an item on a menu, press ▲ or ▼ to highlight (blue) the menu item and then press ⏪.
- When using the meter to remotely control your pump, the buttons of the meter have differing functions. For more information, see the Advanced Owner's Booklet.

Bluetooth Wireless Technology Icon Communication States

You may turn *Bluetooth* wireless technology on or off at any time using the meter.

Icon	Communication State
	<i>Bluetooth</i> wireless technology is on. The meter and pump are communicating.
	<i>Bluetooth</i> wireless technology is off. The meter and pump are not communicating.
	<i>Bluetooth</i> wireless technology is on. However, the meter and pump are not communicating.

Connecting to the Pump screen:



This screen appears when *Bluetooth* wireless technology is on and the meter is connecting to the pump.

Features on a screen:

Title Bar

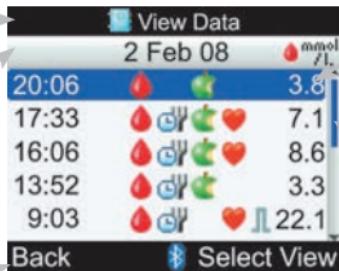
Primary menu title is displayed here.

Secondary Title Bar

When necessary, a secondary title bar appears. Secondary menu text is displayed here.

Left Soft Key Option

Press  to select the option above the button on the screen.



Highlighted Option

When a menu choice or item is selected, it is highlighted in blue.

Scroll Bar

If there is more information available than fits on the screen, a vertical scroll bar appears on the right side of the screen.

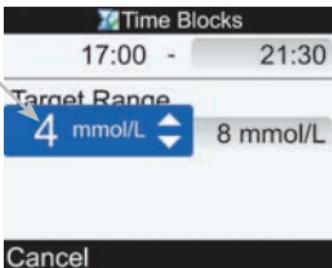
Right Soft Key Option

Press  to select the option above the button on the screen.

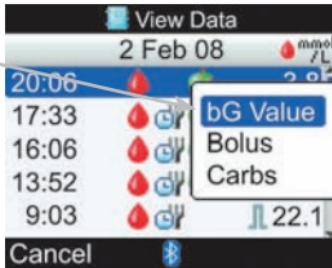
Information can be entered on some screens. Numerical entry fields appear as pop-up entry fields. When an option must be selected, it appears as a pop-up menu.

- To open a pop-up menu or entry field, press .
- Press  or  to select the appropriate pop-up menu option or until the correct numerical entry is present, and then press .
- Press and hold  or  to scroll faster.

Pop-Up Entry Field



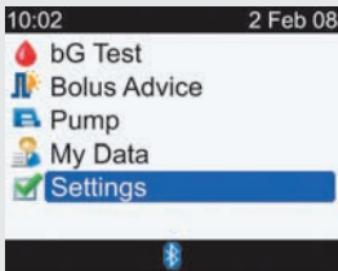
Pop-Up Menu



General Navigation Steps

To change the settings or enter information into the meter:

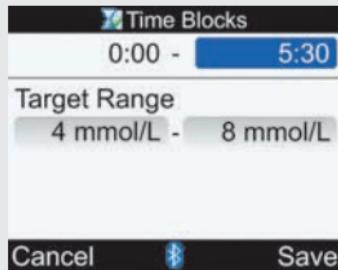
1.



Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00

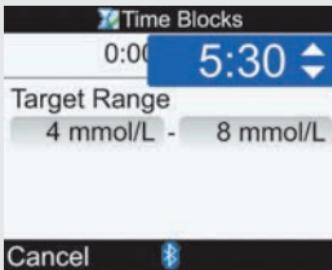
- ▶ Press ▲ or ▼ to select a menu option and press ⏪.
- ▶ Repeat the previous step as necessary.

2.



- ▶ Press Δ or ∇ or \blacktriangleleft or \blacktriangleright to select an option or a desired entry field and press SELECT .

3.



- ▶ Press Δ or ∇ to select the desired entry and press SELECT .
- ▶ Repeat Steps 2 and 3, as necessary.

4.

- ▶ Select Save by pressing to save changes and return to the previous screen.

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2.1 Overview

It is important to understand how to perform a blood glucose test properly.

 **NOTE**

Blood glucose and bG are interchangeable and mean the same thing.

2.2 Using the Accu-Chek Aviva Combo System

Before You Start Testing

- Only use Accu-Chek Aviva Test Strips.
- Store the unused test strips in their original container.
- Immediately after you take out a test strip, securely close the container. This helps keep the test strips dry.
- Use the test strip immediately after you take it out of the container.
- Be sure to check the use by date on the test strip container. Do not use the test strips after the use by date.
- Store the test strip container and the meter in a cool, dry place, such as a bedroom. Do not freeze. Refer to the test strip package insert for specifications on storage conditions.
- Use test strips at temperatures within the range indicated in the test strip package insert.
- Do not apply blood or control solution to the test strip before you insert it into the meter.



WARNING

Do not store test strips in high heat and moisture areas (bathroom or kitchen). Heat and moisture can damage the test strips.

2.3 Performing a Blood Glucose Test

Before you perform your first blood test, ensure the meter is set up correctly and that you perform a control test. You need the meter with a pre-inserted activation chip, a test strip, and a finger pricker.



WARNING

- Do not change your treatment because of one blood glucose test result.
- NEVER ignore symptoms of high or low blood glucose.



NOTE

If you need to perform a control test, only use Accu-Chek Aviva Control Solutions. See Chapter 3, “Control Testing” for more information about control testing.

Performing a Fingertip Blood Glucose Test

Prepare > Check the Use By Date > Insert Test Strip > Test Blood Sample > bG Test Result

1.

- ▶ Wash and dry your hands.
- ▶ Prepare the finger pricker for a fingertip test.

2.



- ▶ Check the use by date date on the test strip container. Do not use test strips past the use by date.

3.



- ▶ Insert the golden end of a test strip into the meter in the direction of the arrow. The meter turns on.

4.



The Apply Sample screen appears. The test strip is ready for testing.

5.



Fingerstick:

- ▶ Perform a fingerstick with the finger pricker.

6.



Fingerstick:

- ▶ Gently squeeze your finger to assist the flow of blood. This helps you get a blood drop.

7.



- ▶ Touch the blood drop to the **front edge** of the yellow window of the test strip. Do not put blood on top of the test strip.

8.

bG Test
Analyzing



When the test strip has enough blood, the Analyzing screen appears.

9.

bG Result
10:02 2 Feb 08

5.8 mmol/L

The result appears on the display.

10.



Approximately 3 seconds later,
the detailed bG Result screen
appears.

- ▶ Remove and discard the used test strip.

 **NOTE**

- If the blood drop is too small, reapply pressure to get a sufficient blood drop.
- For more information regarding blood glucose test results, see Section 2.5, “Understanding Blood Glucose Test Results.”
- To add detailed information to the blood glucose test (meal time, carbs, and health events) see Section 2.4, “Detailed Blood Glucose Test Results.”
- If a test strip error occurs, remove and discard the used test strip and repeat the test with a new test strip.
- Be careful not to put any fluids into the test strip slot.
- The meter cannot be turned off when the following screens are displayed:
 - Match Code to Vial
 - Apply Sample
 - Analyzing
 - bG Result
- When a test strip is in the meter, the buttons are inactive. The buttons become active when you remove the test strip or when the test is complete.
- The meter turns off automatically in approximately 2 minutes if no buttons are pressed.

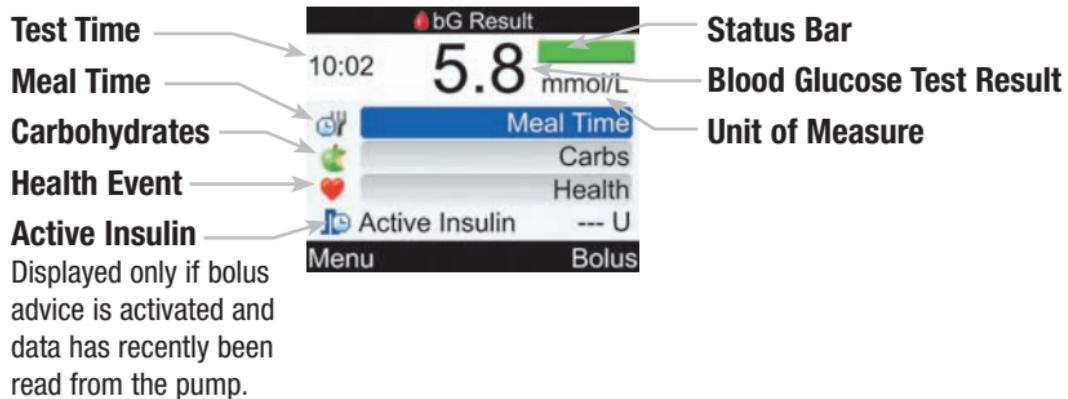
 **NOTE**

Other ways to start a blood glucose test:

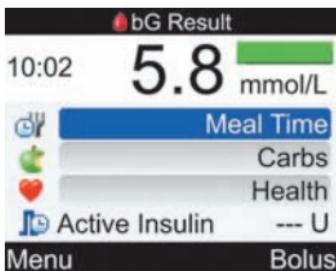
- From the Main Menu, select bG Test and press . Insert a test strip into the meter.
- When a reminder notification or the key lock icon is displayed, insert a test strip into the meter.
- From the Main Menu, select Bolus Advice and press . If “bG Test” is displayed instead of an actual blood glucose value, then you can start a blood glucose test by selecting bG Test. If an actual blood glucose value is displayed, then you cannot start a blood glucose test using this process.

2.4 Detailed Blood Glucose Test Results

The detailed bG Result screen displays the following information:



Detailed bG Results > Change Meal Time/Carbs/Health Events (Optional)



The detailed bG Result screen allows you to view and to add information to a blood glucose test result.

How to Add Information to a Blood Glucose Result

To Change Meal Time:

- ▶ Select the Meal Time entry field and press .
- ▶ Select either Pre Meal, Post Meal, Bedtime, or Other and press .

To Change Carbs:

- ▶ Select the Carbs entry field and press .
- ▶ Set the number of carbs and press .

To Change Health Events:

- ▶ Select the Health entry field and press .
- ▶ Select either Fasting, Exercise 1, Stress, Illness, Exercise 2, or Premenstrual and press .

Active Insulin Display:

The meter displays the calculated amount of Active Insulin.

To save the changes and exit the detailed bG Result screen:

- ▶ To return to the Main Menu, select Menu.
- ▶ To proceed to the Bolus Advice screen, select Bolus.

Bolus Advice is not available if:

- ▶ The blood glucose test result is below the hypo warning limit.
- ▶ The detailed bG Result screen has been displayed for more than 5 minutes. The warning message “Bolus Advice Timeout” is displayed. Select OK to return to the detailed bG Result screen.

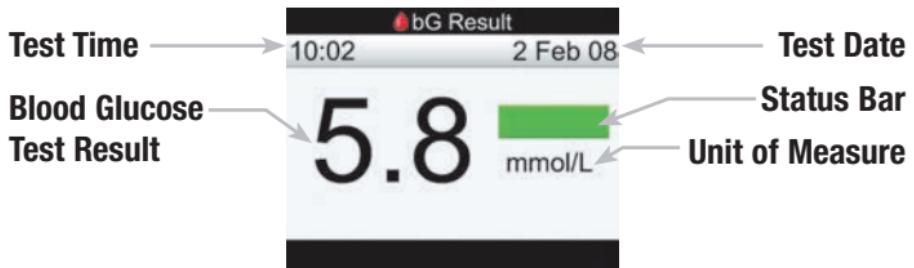
For more information about bolus advice, see the Advanced Owner’s Booklet.

 **NOTE**

- You can add information on the detailed bG Result screen for meal time, carbs, and health events.
- Review and, if necessary, update information for meal time, carbs, and health events to receive an accurate bolus recommendation.
- Active insulin is bolus insulin that has been given to lower your blood glucose, but has not yet been fully used.
- Active insulin appears only if bolus advice is activated.
- Calculation of the amount of the active insulin is completed automatically by the meter. If necessary, the meter rounds the active insulin amount.
- If the active insulin amount is calculated as zero, then the value is displayed as 0.
- If active insulin data is not found, then active insulin value is displayed as “---U.”
- If Bolus is selected, then the Connecting to the Pump screen appears before the Bolus Advice screen is displayed.

2.5 Understanding Blood Glucose Test Results

The bG Result screen displays the following information:

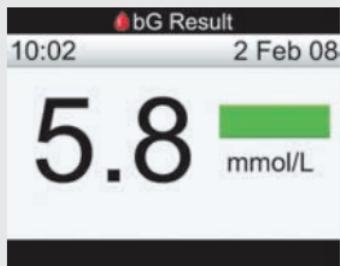


i NOTE

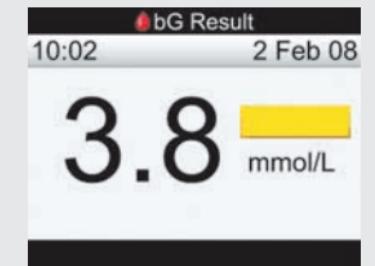
- If the dosed test strip is removed from the meter before results or errors are displayed, a blood glucose test result will not appear.
- After approximately 3 seconds, the meter displays the detailed bG Result screen (see Section 2.4, "Detailed Blood Glucose Test Results").

Status Bar

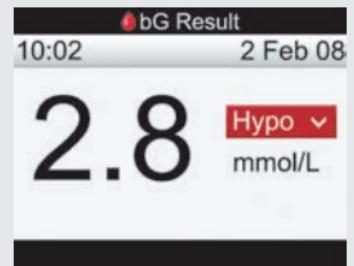
The status bar on the bG Result screen indicates how the result compares to the target blood glucose range for the current time block. The following are status bar descriptions with sample displays:



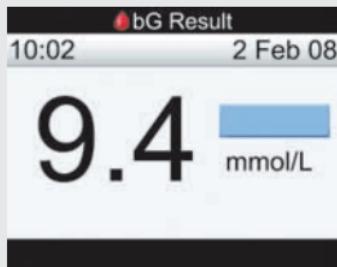
Green indicates the result is within the target range for the current time block.



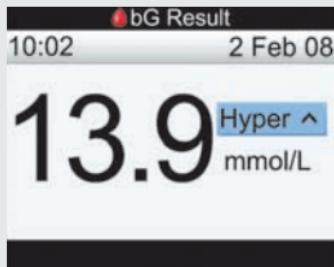
Yellow indicates the result is below the target range for the current time block. The result is not below the hypo warning limit.



Red with "Hypo" indicates the result is below the hypo warning limit.



Light blue indicates the result is above the target range for the current time block. The result is not above the hyper warning limit.



Light blue with “Hyper” indicates the result is above the hyper warning limit.

LO or HI Display

bG Result
10:02 2 Feb 08

LO

If “LO” is displayed, the test result may be below the measurement range.

- ▶ Contact your healthcare professional.

bG Result
10:02 2 Feb 08

HI

If “HI” is displayed, the test result may be above the measurement range.

- ▶ Contact your healthcare professional.

NOTE

Blood Glucose Warnings

If the blood glucose test results are outside the hyper or hypo warning limits, or outside the measurement range of the meter, then a warning is displayed after the bG Test Result screen. Select OK to acknowledge a warning and continue.

2.6 Unusual Blood Glucose Test Results

If your blood glucose result does not match the way you feel, follow these steps:

Troubleshooting Checks	Actions
1. Are the test strips expired?	Discard the test strips if they are past the use by date. Repeat the blood glucose test with an unexpired test strip.
2. Has the cap on the test strip container always been closed tightly?	Replace the test strips if you think the test strip container was uncapped for some time and repeat the blood glucose test.
3. Was the test strip used immediately after it was removed from the test strip container?	Repeat the blood glucose test with a new test strip.
4. Were the test strips stored in a cool, dry place?	Repeat the blood glucose test with a properly stored test strip.
5. Did you follow the directions?	Read Chapter 2, “Testing Your Blood Glucose” and repeat the blood glucose test again. Contact Roche if you still have problems.
6. Are the meter and test strips working properly?	Perform a control test. See Chapter 3, “Control Testing”.
7. Are you still unsure of the problem?	Contact Roche.

After performing a control test and repeating a blood glucose test, if your blood glucose test results still do not reflect the way you feel, contact your healthcare professional immediately.

2.7 Symptoms of High or Low Blood Glucose

Being aware of the symptoms of high or low blood glucose can help you understand your test results and decide what to do if they seem unusual. Here are the most common symptoms:

- High blood glucose (hyperglycaemia): fatigue, increased appetite or thirst, frequent urination, blurred vision, headache, or general aching.
- Low blood glucose (hypoglycaemia): sweating, trembling, blurred vision, rapid heartbeat, tingling, or numbness around mouth or fingertips.



WARNING

If you are experiencing any of these symptoms, test your blood glucose. If your blood glucose test result is displayed as LO or HI, contact your healthcare professional immediately.

3 Control Testing

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3.2 Why Perform Control Tests	61
3.3 About the Control Solutions	62
3.4 Performing a Control Test	63
3.5 Understanding Control Test Results	69

3.1 Overview

This chapter describes how and when to perform a control test to ensure the accuracy of your blood glucose meter. It is recommended you complete a control test prior to performing a blood glucose test for the first time.

 **NOTE**

Blood glucose and bG are interchangeable and mean the same thing.

3.2 Why Perform Control Tests

Performing a control test lets you know the meter and test strips are working properly to give reliable blood glucose test results. You should perform a control test when:

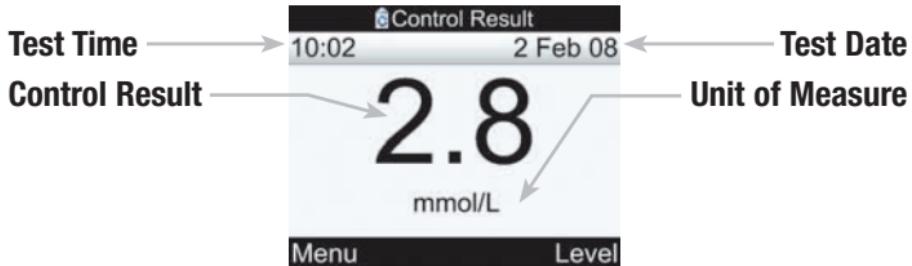
- You open a new test strip box.
- You left the test strip container open.
- You want to check the meter and test strips.
- Your test strips were stored in extreme temperatures, humidity, or both.
- You dropped the meter.
- Your test result does not match with how you feel.
- You want to check if you are performing the test correctly.

3.3 About the Control Solutions

- Only use Accu-Chek Aviva Control Solutions.
- The meter automatically recognizes the control solution.
- The control test results are not displayed in the diary.
- Write the date you opened the control solution bottle on the bottle label. The solution is good for 3 months from that date or until the use by date on the bottle label, whichever comes first.
- Do not use control solution that is past the use by date.
- The solution can stain clothing. If you spill it, wash your clothes with soap and water.
- Close the bottle tightly after use.

3.4 Performing a Control Test

The Control Result screen displays the following information:



You need the meter with a pre-inserted activation chip, a test strip, and control solution Level 1, Level 2, or both. The control level is printed on the bottle label.

Check the Use By Date > Insert Test Strip > Test Control Solution > Control Result

1.



- ▶ Check the use by date on the test strip container. Do not use test strips past the use by date.

2.



- ▶ Insert the golden end of a test strip into the meter in the direction of the arrow. The meter turns on.

3.



The Apply Sample screen appears. The test strip is ready for testing.

4.



► Select the control solution to test. You will enter the level later in the test.

5.



► Place the meter on a flat surface, like a table.

6.



► Remove the control bottle cap. Wipe the tip of the bottle with a tissue.

7.



- ▶ Squeeze the bottle until a tiny drop forms at the tip.
- ▶ Touch the drop to the **front edge** of the yellow window of the test strip. Do not put control solution on top of the test strip.

8.

bG Test
Analyzing



When the test strip has enough control solution, the Analyzing screen appears.

- ▶ Wipe the tip of the bottle with a tissue and then cap the bottle tightly.

9.

Control Result
10:02 2 Feb 08

2.8

mmol/L

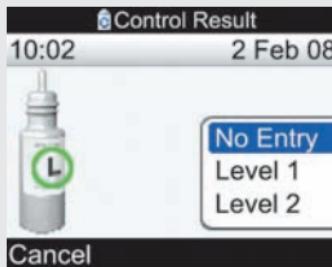
Menu

Level

The control result appears on the display.

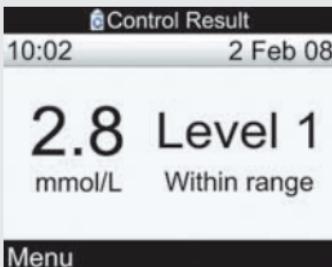
- ▶ Select Level to display the control solution level pop-up menu.

10.



- ▶ Select the control solution level and press .

11.



- ▶ Remove and discard the test strip.
- ▶ For information on understanding control test results, proceed to the next section, or select Menu to save this result and display the Main Menu screen.

 **NOTE**

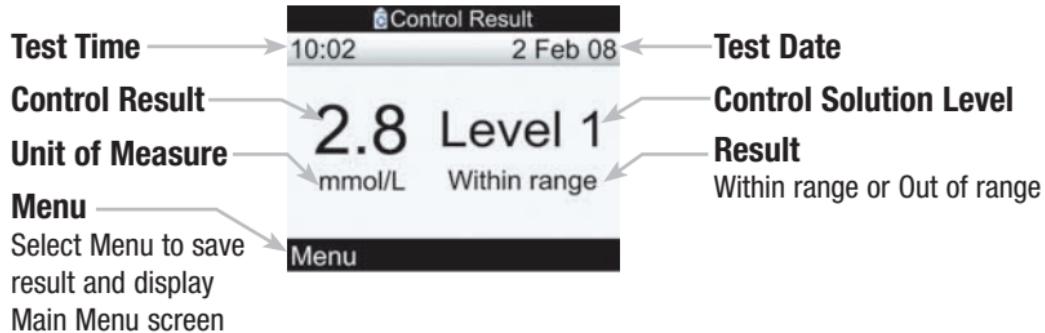
- If a test strip error occurs, remove and discard the used test strip and repeat the test with a new test strip.
- Be careful not to put any fluids into the test strip slot.
- When the Control Level screen is displayed and you select Cancel without selecting a control solution level, then No Entry is chosen. The meter stores the control test result along with No Entry and then the Detailed Control Result screen is displayed.
- When the Control Level screen is displayed and you turn off the meter, or if the meter auto-powers off, without selecting a control solution level, then No Entry is chosen. The meter stores the control test result along with No Entry.

• Other ways to start a control test:

- From the Main Menu, select bG Test. Insert a test strip into the meter.
- When a reminder notification or the key lock icon is displayed, insert a test strip into the meter.

3.5 Understanding Control Test Results

The detailed Control Result screen displays the following information:



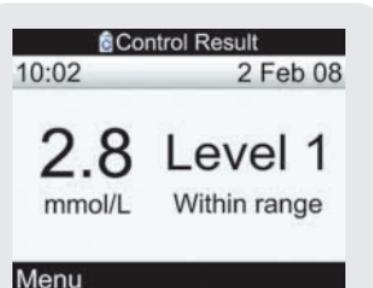


Example
Range (mmol/L)
Level 1 1.4-3.1
Level 2 14.2-19.1

- ▶ The label on your test strip container shows the acceptable ranges for both the Level 1 and the Level 2 control solutions. The test result you get should be inside this range. Ensure you select and compare the test result to the correct level of control. For the level selected, the meter displays whether the result is within or outside of the acceptable range.

- ▶ When the control test result is inside the range on the test strip container, the test strips and the meter are working properly.

Example Control Results



If the control test result is within the acceptable range, "Within range" appears on the detailed Control Result screen.

Control Result
10:02 2 Feb 08

4 Level 1
mmol/L Out of range

Menu

If the control test result is outside of the acceptable range, “Out of range” appears on the detailed Control Result screen.

Control Result
10:02 2 Feb 08

HI Level 1

Menu

If “HI” is displayed, the control test result may be above the measurement range.

Control Result
10:02 2 Feb 08

LO Level 1

Menu

If “LO” is displayed, the control test result may be below the measurement range.

Control Result
10:02 2 Feb 08

2.8 ---

mmol/L

Menu

If the meter stored No Entry for the control solution level, then “---” appears with no indication of in or out of range.

Out-of-Range Control Test Results

If the control test result is out of range, check this list to help solve the problem:

Troubleshooting Checks	Actions
1. Were either the test strips or control solutions expired?	Discard the test strips or control solutions if either is past the use by date. If the control solution was opened more than 3 months ago, discard it. Repeat the control test with an unexpired test strip and an unexpired control solution.
2. Did you wipe the tip of the control solution bottle before use?	Wipe the tip of the bottle with a tissue. Repeat the control test with a new test strip and a fresh drop of control solution.
3. Were the caps on the test strip container and the control solution bottle always closed tightly?	Replace the test strips or control solutions if you think either was uncapped for some time and repeat the control test.
4. Was the test strip used immediately after it was removed from the test strip container?	Repeat the control test with a new test strip and a fresh drop of control solution.
5. Were the test strips and control solutions stored in a cool, dry place?	Repeat the control test with a properly stored test strip and control solution.
6. Did you follow the directions?	Read Chapter 3, “Control Testing” and repeat the control test. Contact Roche if you still have problems.

Troubleshooting Checks	Actions
7. Did you choose the correct control solution level, either 1 or 2, when you performed the control test?	If you chose the wrong control solution level, you can still compare the control result to the range printed on the test strip container.
8. Are you still unsure of the problem?	Contact Roche.

4 Managing Your Data

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4.1 Overview

Analyzing your blood glucose test results stored in the meter is an effective way for you and your healthcare professional to determine how well you are controlling your diabetes. This analysis is a valuable tool for making improvements to your diabetes management. The reports the meter displays help you get the most from your Accu-Chek Aviva Combo Meter.

From the diary records stored in the meter, you are able to view a specific blood glucose test record with its attributes (e.g., meal time, carbs, health event, and bolus). In addition, for a specific diary record, you are able to change or add to its attributes.

The meter generates reports, such as blood glucose averages with standard deviations for the time period you select (e.g., the past 7 days or the past 30 days). Graphs can be a good way to view your blood glucose test results. The meter can display a line graph to depict blood glucose record trends, a graph showing result ranges for a standard day or a standard week, and a pie chart with different colours to illustrate the amount of test results within, above, or below your blood glucose target range.

NOTE

- You must be the only user of the meter because the diary data will be incorrect if the meter is shared.
- Blood glucose and bG are interchangeable and mean the same thing.

Storing Test Results

The meter automatically stores up to 1,000 diary records with the time and date. You can review up to 250 diary records on the meter or up to 1,000 diary records using a computer with compatible software. Diary records are stored from the newest to the oldest. It is very important to have the correct time and date set. Having the correct time and date setting helps ensure accurate interpretation of blood glucose test results by you and your healthcare professional.

Each diary record can contain:

- Date and time
- Blood glucose test result
- Meal time (events)
- Carbs
- Health event
- Bolus type
- Bolus amount

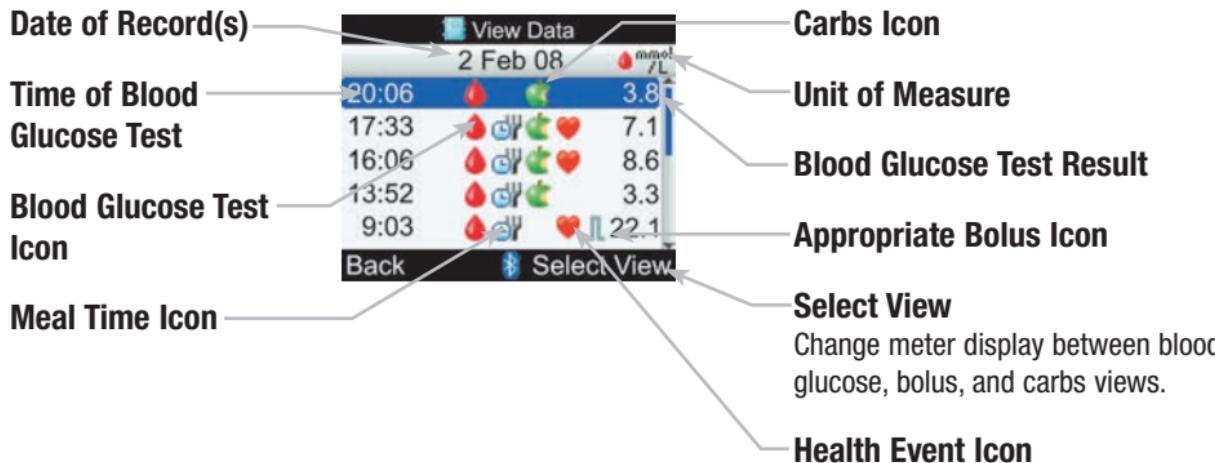
You can display filtered diary data in graphical or table format.

 **NOTE**

- **Do not change your therapy based on one individual record or test result in the diary.**
- This chapter shows sample screens. The screens may look slightly different from the screens on the meter. If you have any questions about the meter screens, contact Roche.
- The information in the diary is saved when you replace the batteries. You need to check the time and date after you replace the batteries. For more information on changing the batteries, see Chapter 7, "Care and Maintenance."
- Once 1,000 records are in the diary memory, adding a new record causes the oldest diary record to be deleted.
- The control results are stored in memory, but cannot be reviewed on the meter.
- Before reviewing diary records or control results with software, the stored diary records must first be downloaded to a compatible software application. For product availability, please contact Roche.
- Control results are not used in any report or graph.

4.2 Viewing or Modifying Your Data

The View Data screen displays the following information:



 **NOTE**

- If data are not available, the No Data Available screen is displayed.
- The View Data screen displays the records in the order in which they occurred with the most recent record shown on top.
- For the blood glucose test result:
 - “HI” is displayed if the test result is above the measurement range.
 - “LO” is displayed if the test result is below the measurement range.
 - The blood glucose test result is blank if a blood glucose test value does not exist.

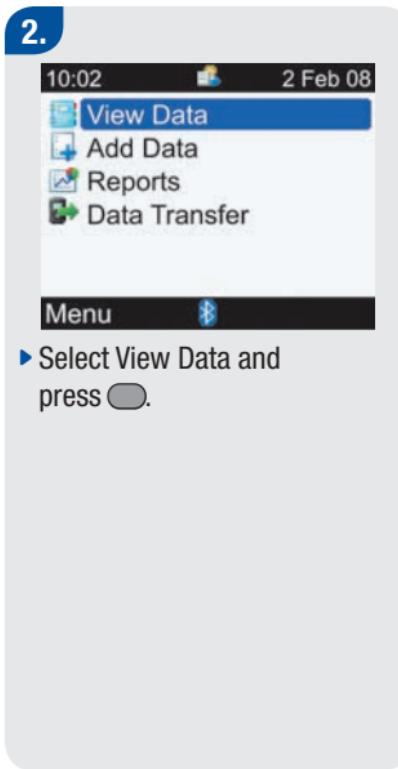
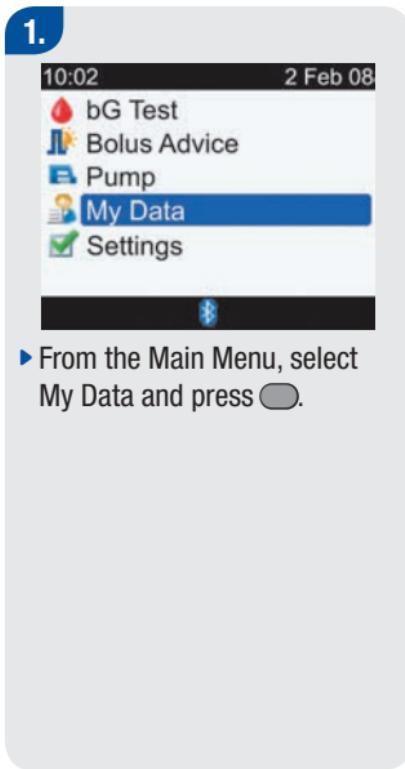
Refer to the following two tables for icon descriptions:

Icon	Icon Name	Description
	bG Test	Icon is displayed when information exists for this diary record regarding a blood glucose test.
	Meal Time	Icon is displayed when information exists for this diary record regarding meal time.
	Carbs	Icon is displayed when information exists for this diary record regarding carbs.
	Health Event	Icon is displayed when information exists for this diary record regarding health events.
	Standard Bolus Not Confirmed	Delivery has not been confirmed by the pump.
	Standard Bolus Confirmed	Delivery has been confirmed by the pump.
	Multiwave Bolus Not Confirmed	Delivery has not been confirmed by the pump.
	Multiwave Bolus Confirmed	Delivery has been confirmed by the pump.
	Extended Bolus Not Confirmed	Delivery has not been confirmed by the pump.

Icon	Icon Name	Description
	Extended Bolus Confirmed	Delivery has been confirmed by the pump.
	Manual Pump	Delivery has not been confirmed by the pump.
	Pen/Syringe Bolus	Pump does not deliver bolus.

You can view a diary record with its attributes (blood glucose value, meal time, carbs, health event, and bolus).

Main Menu > My Data > View Data



- ▶ From the Main Menu, select My Data and press .
- ▶ Select View Data and press .

3.

Blood Glucose View:

View Data		
2 Feb 08	mmol/L	
20:06	3.8	
17:33	7.1	
16:06	8.6	
13:52	3.3	
9:03	22.1	

Back

Select View

Bolus View:

View Data		
2 Feb 08	LU	
20:06		
17:33		
16:06		
13:52		
9:03		5

Back

Select View

Carbs View:

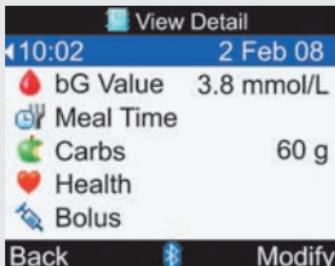
View Data		
2 Feb 08	g	
20:06	60	
17:33	60	
16:06	20	
13:52	60	
9:03		

Back

Select View

- Shown above are View Data screens that display values for blood glucose, bolus, or carbs. To choose another view, press  (a pop-up menu appears). Select the view you want and press .
- Press  or  to view other records (the screen scrolls if there are additional records).
- To view or modify a record's details, select the record and press .

4.



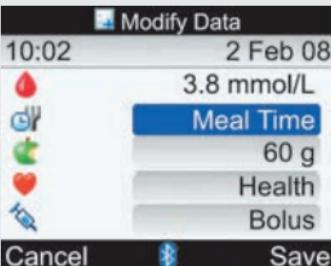
- ▶ Press to view the previous record or press to view the next (newer) record.

To return to the previous screen, select Back.

or

To modify a diary record, select Modify and continue to the next step.

5.



- ▶ Select the entry field to modify and press .
- ▶ Make the change in the entry field and press .
- ▶ Modify other fields, as needed.

To save the changes and return to the View Detail screen, select Save.

NOTE

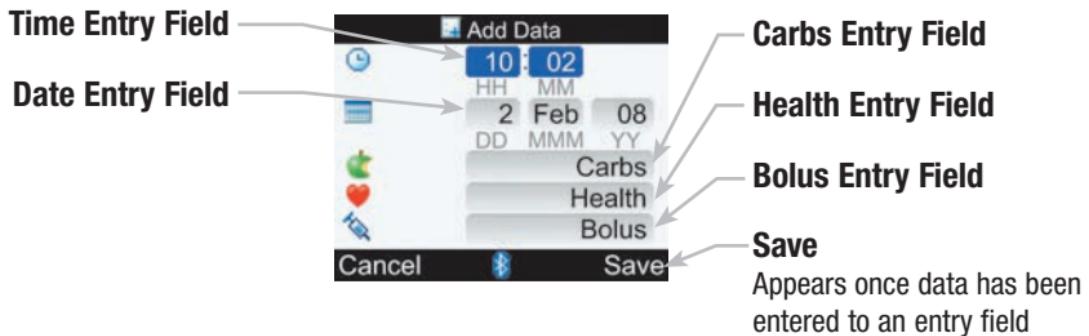
To cancel changes or return to the View Detail screen, select Cancel.

The following fields cannot be modified with the specified condition:

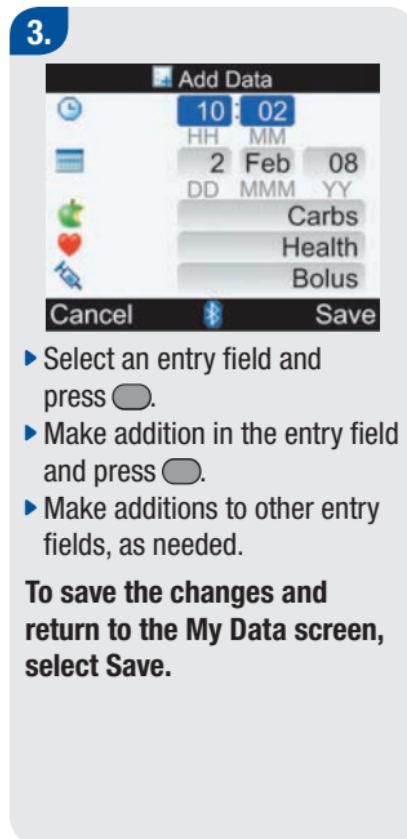
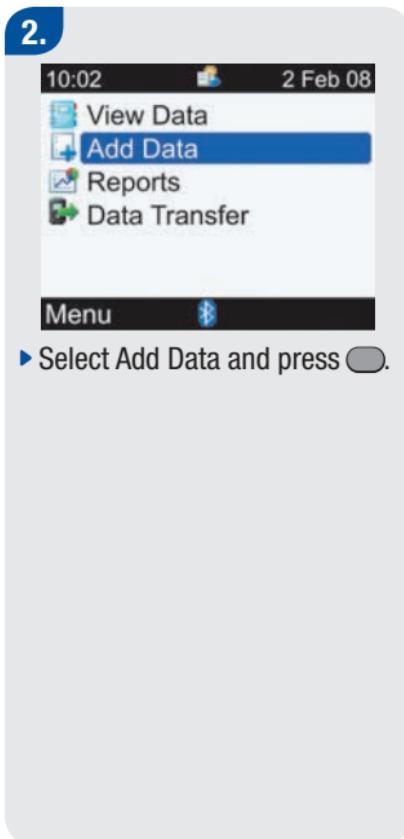
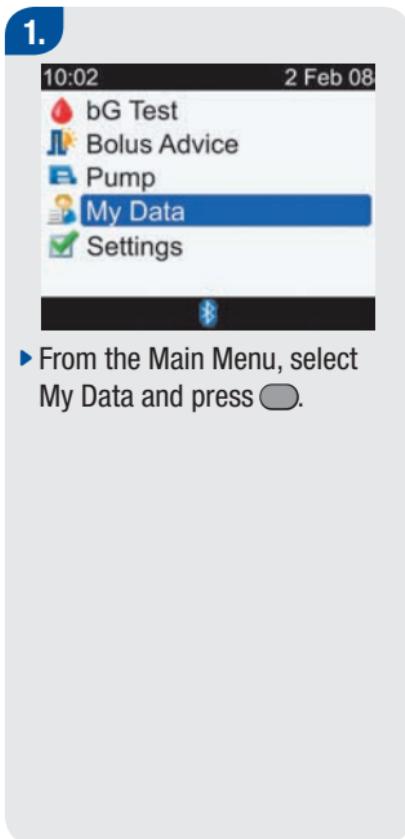
Fields	Cannot be modified if the ...
Bolus	Bolus type is confirmed standard, extended, or multiwave
Bolus	Blood glucose test result was below the hypo warning limit
Meal Time	Record has no blood glucose value
Meal Time, Carbs, Health Event, and Bolus	Record has been used for bolus advice

4.3 Adding New Data

You can add data to a diary record for carbs, health, and bolus. The Add Data screen displays the following information:



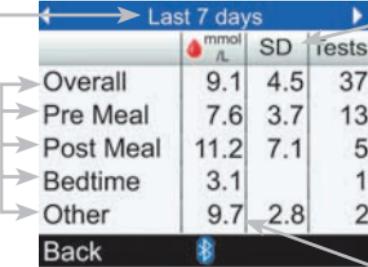
Main Menu > My Data > Add Data



i NOTE

- The meter initially displays the current date and the current time. You can change the date and time when adding a diary record, although the date and time cannot be set in the future.
- Before a diary record can be saved, data must be entered (not including date and time). “Save” is not displayed above  until data has been entered.
- To cancel changes and return to the My Data screen, select Cancel.

4.4 Reporting Your Data



	Last 7 days	mmol/L	SD	tests
Overall	9.1	4.5	37	
Pre Meal	7.6	3.7	13	
Post Meal	11.2	7.1	5	
Bedtime	3.1		1	
Other	9.7	2.8	2	
Back				

Time Range → Last 7 days

Meal Times → Overall, Pre Meal, Post Meal, Bedtime, Other

Blood Glucose Standard Deviation → Calculated for the time range

Number of Tests → Used to calculate the averages and standard deviations

Blood Glucose Average → Calculated for the time range

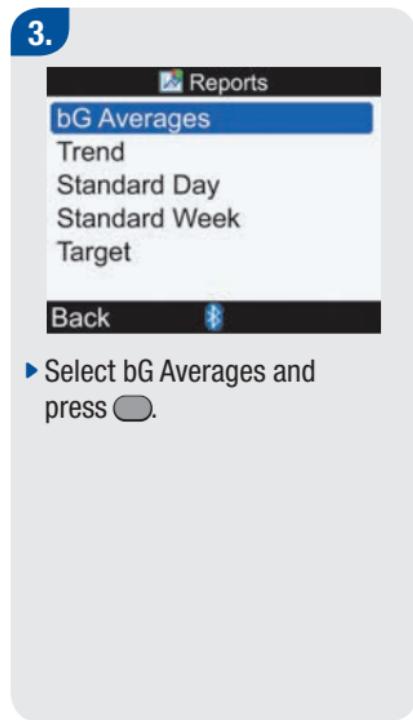
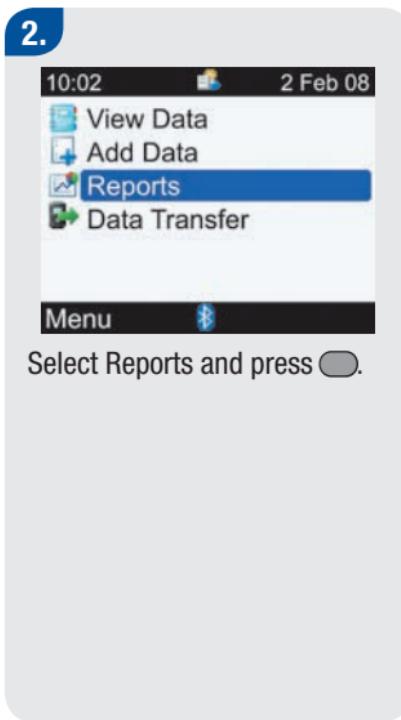
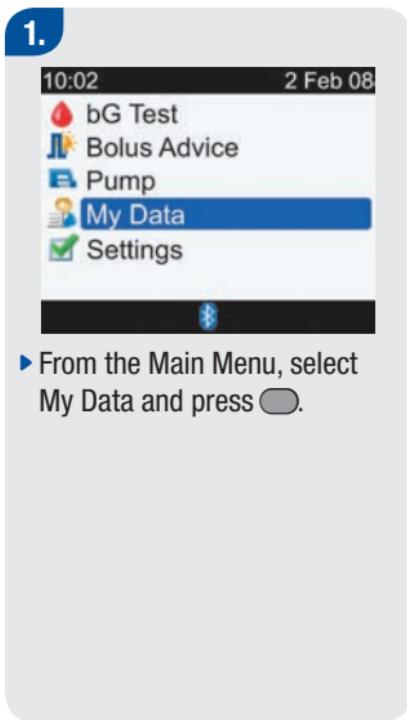
 **NOTE**

- If data are not available to calculate averages, the No Data Available screen is displayed.
- Standard deviation measures how much the blood glucose test results are scattered around the blood glucose average. A low standard deviation means the blood glucose test results are tightly clustered around the blood glucose average; a high standard deviation means the blood glucose test results are widely scattered around the blood glucose average.
- Calculations do not include corrupt results, control results, or HI and LO results.

Reporting Your Blood Glucose Averages

The meter displays your blood glucose averages and standard deviations for the time range you choose (7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > bG Averages



- ▶ From the Main Menu, select My Data and press .

Select Reports and press .

- ▶ Select bG Averages and press .

4.

Last 7 days			
	mmol/L	SD	Tests
Overall	9.1	4.5	37
Pre Meal	7.6	3.7	13
Post Meal	11.2	7.1	5
Bedtime	3.1		1
Other	9.7	2.8	2

Back 

The blood glucose averages are displayed.

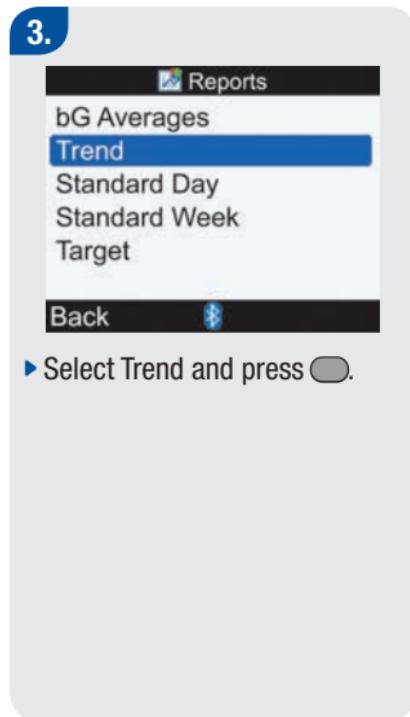
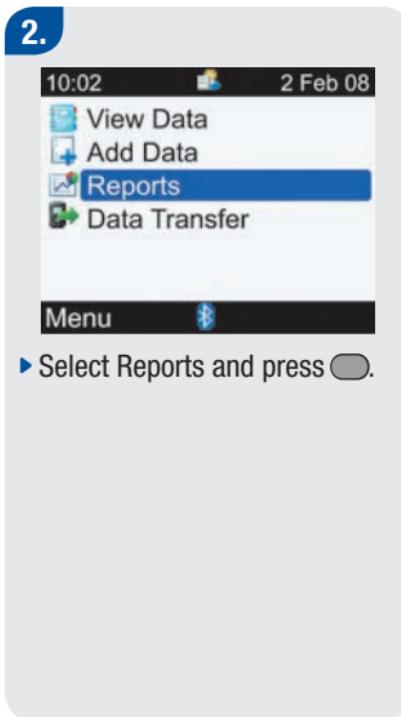
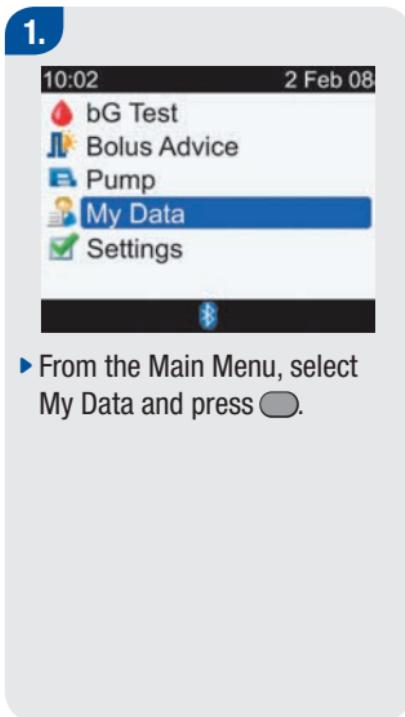
- ▶ To display blood glucose averages for another time range (last 7, 14, 30, 60, or 90 days), press either ◀ or ▶ to scroll the screen until you reach the time range you need.

To return to the Reports screen, select Back.

Reporting Your Data Trends

The meter displays your blood glucose record trends for the time range you choose (last 8 hours, 24 hours, 48 hours, or 7 days).

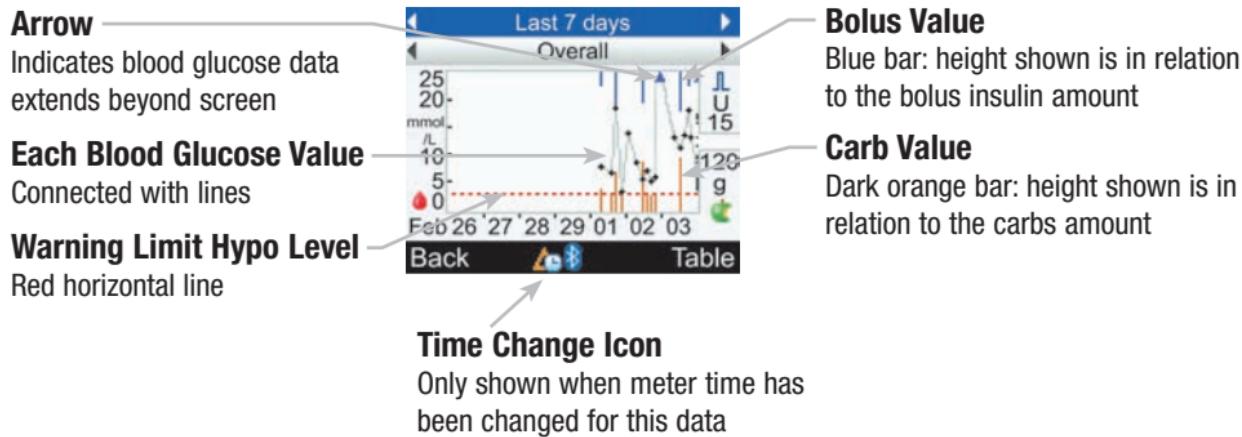
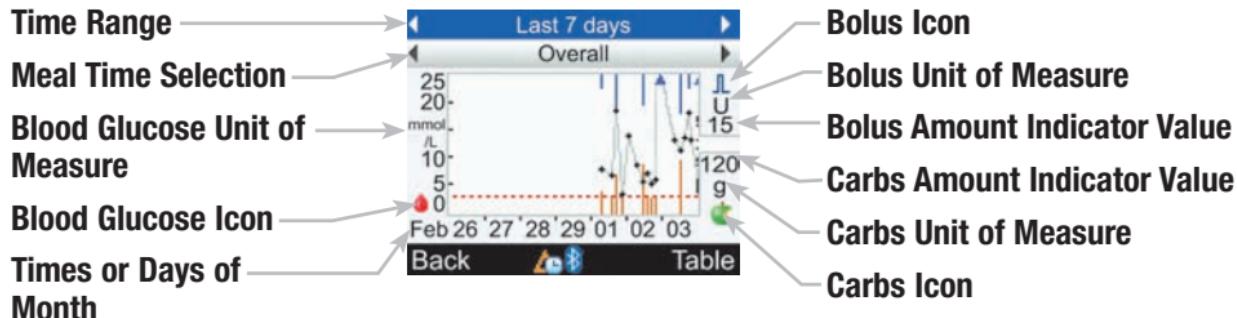
Main Menu > My Data > Reports > Trend



- ▶ From the Main Menu, select My Data and press .
- ▶ Select Reports and press .

- ▶ Select Trend and press .

Trend Graph Screen



Follow these tips to get the most value from My Data reports:

- If you delivered a bolus directly on the pump, go to My Data on the meter to receive the bolus information automatically. Do this before your next blood glucose test.
- Replace the batteries when the Low Battery icon appears. This maintains the communication between meter and pump.

i NOTE

- If data are not available to display the trend graph, the No Data Available screen is displayed.
- Trend graphs do not include corrupt results or control results.
- Trend graph data is cleared if bolus advice data is cleared.
- If  (time change icon) is shown at the bottom of the Trend Graph screen, the time and date of one or more data points in the trend graph may not match the time stamp in My Data because the meter clock has been changed. All times in the trend graph show the data relative to the current meter time.

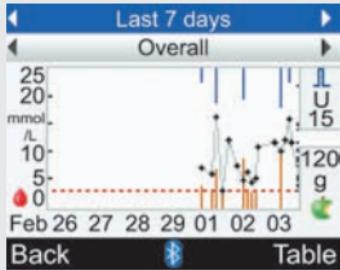
For example:

1. You take a bG test and the value is stored in the meter at 9:00.
2. The meter time is changed ahead 1 hour.
3. The bG data on the trend graph is shown at 10:00.

- On the right side of the graph, the Maximum Bolus Amount Indicator is a horizontal line with the corresponding value shown above it. The purpose of this indicator is to scale the top portion of the graph for the Bolus Value blue bars. The Maximum Bolus Amount Indicator values available on the meter are 1, 5, 15, 30, and 60 U. The indicator displayed is based on the single largest bolus insulin amount delivered for the time range chosen. For example, if the largest bolus delivered during the chosen time range is 8 U, then the meter will scale the upper graph to be between 0 and 15 U.
- On the right side of the graph, the Maximum Carbs Amount Indicator is a horizontal line with the corresponding value shown below it. The purpose of this indicator is to scale the bottom portion of the graph for the Carb Value dark orange bars. The Maximum Carbs Amount Indicator values available on the meter are 30, 60, 120, 180, and 240 g, or the equivalent scale for BE, KE, or CC. The indicator displayed is based on the single largest carbs amount for the time range chosen. For example, if the largest carbs amount for the chosen time range is 86 g, then the meter will scale the lower graph to be between 0 and 120 g.
- Select Table to change the display to the Table View. The time range remains the same.

Trend Graph

1.



- To display a trend graph for another time range (last 8 hours, 24 hours, 48 hours, or 7 days), press Δ to highlight the time range selection field (top of screen). Press either \blacktriangleleft or \triangleright until you reach the time range you need.

2.

- To display a trend graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either \blacktriangleup or \blacktriangledown to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either \blacktriangleleft or \triangleright until you reach the meal time selection you need.

3.

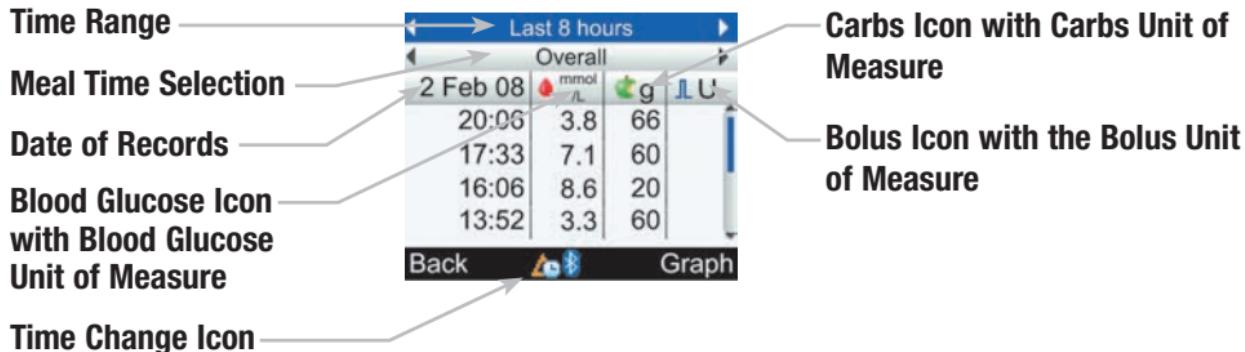
- Press \blacktriangleleft to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

 **NOTE**

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Trend Table Screen



Time Change Icon

Only shown when meter time has been changed for this data

 **NOTE**

- If data are not available to display the trend table, the No Data Available screen is displayed.
- Trend tables do not include corrupt results or control results.
- If  (time change icon) is shown at the bottom of the Trend Table screen, the time and date of one or more data points in the trend table may not match the time stamp in My Data because the meter clock has been changed. All times in the trend table show the data relative to the current meter time.

For example:

1. You take a bG test and the value is stored in the meter at 9:00.
2. The meter time is changed ahead 1 hour.
3. The bG data on the trend table is shown at 10:00.

- Trend table data is cleared if bolus advice data is cleared.
- For a given record, if the blood glucose value, carb value, or bolus value is empty, the corresponding field is blank.
- The most recent record is displayed first.

Trend Table

1.

Last 8 hours			
Overall			
2 Feb 08	mmol/L	g	U
20:06	3.8	66	
17:33	7.1	60	
16:06	8.6	20	
13:52	3.3	60	

- When there are multiple records, press Δ or ∇ to view other records.

2.

To display a trend table for another time range (last 8 hours, 24 hours, 48 hours, or 7 days), press Δ to highlight the time range selection field (top of screen). Press either \blacktriangleleft or \triangleright until you reach the time range you need.

3.

To display a trend table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either Δ or ∇ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either \blacktriangleleft or \triangleright until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

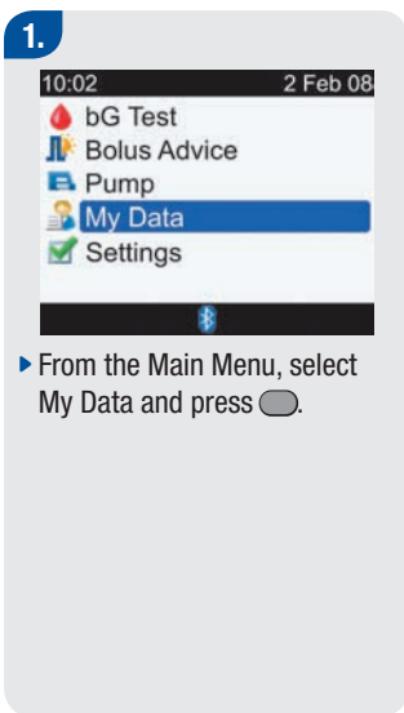
 **NOTE**

The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

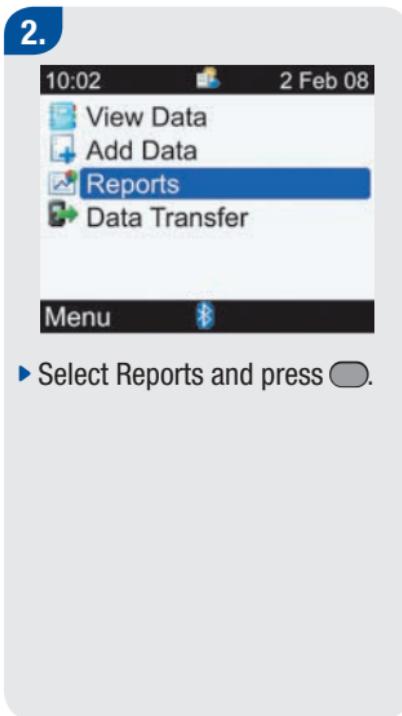
Reporting Your Standard Day

The meter displays (for a standard day) your blood glucose averages, number of tests, and standard deviations within predetermined time blocks for the time range you choose (last 7, 14, 30, 60, or 90 days).

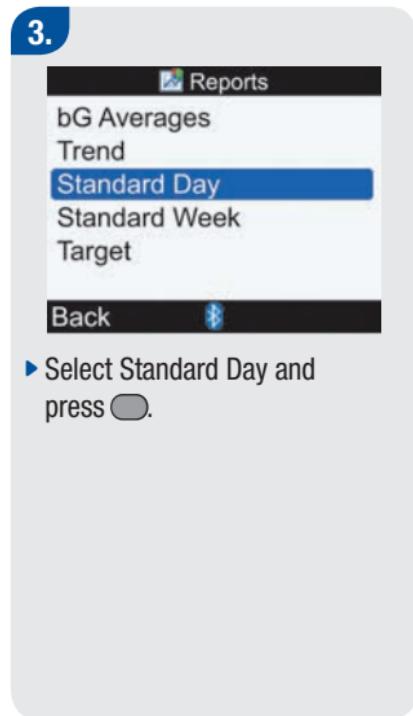
Main Menu > My Data > Reports > Standard Day



- ▶ From the Main Menu, select My Data and press .

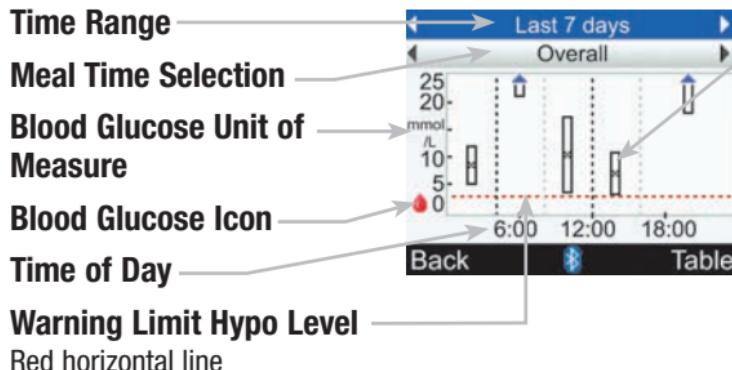


- ▶ Select Reports and press .



- ▶ Select Standard Day and press .

Standard Day Graph Screen



Box for Each Time Block

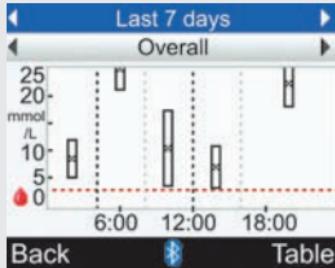
- "X" in centre of box indicates the average of all blood glucose test results for the selected criteria.
- The top of the box indicates 1 standard deviation above the average and the bottom of the box indicates 1 standard deviation below the average. The box is not displayed if there are not enough data to determine standard deviation.
- The top of box is open if the standard deviation is off the top of the graph.
- Box and "X" are not displayed for a time block if no data are found.

 **NOTE**

- If data are not available to display the standard day graph, the No Data Available screen is displayed.
- The standard day graph does not include corrupt results, control results, HI values, or LO values.

Standard Day Graph

1.



- ▶ To display a standard day graph for another time range (last 7, 14, 30, 60, or 90 days), press Δ to highlight the time range selection field (top of screen). Press either \blacktriangleleft or \triangleright until you reach the time range you need.

2.

- ▶ To display a standard day graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either \blacktriangleup or \blacktriangledown to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either \blacktriangleleft or \triangleright until you reach the meal time selection you need.

3.

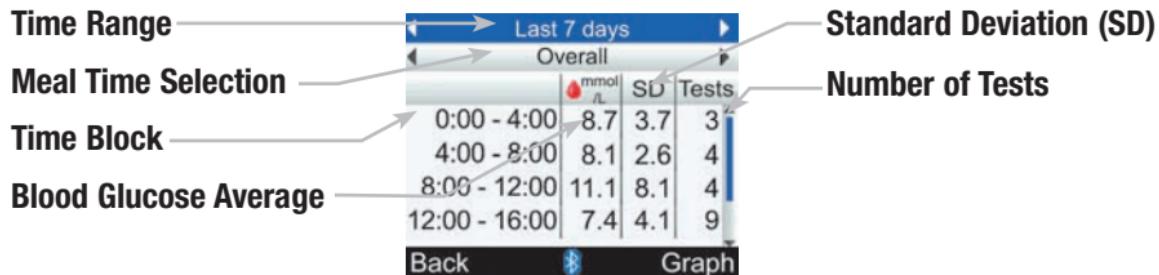
- ▶ Press \blacktriangleleft to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

 **NOTE**

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Standard Day Table Screen

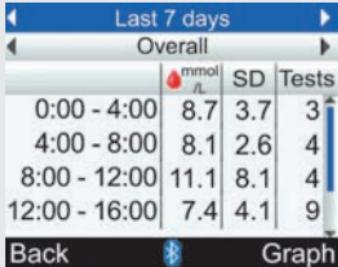


 **NOTE**

- If data are not available to display the standard day table, the No Data Available screen is displayed.
- Standard day table calculations do not include corrupt results, control results, or HI and LO results.
- For a standard deviation to be displayed for a given time block, there must have been two or more tests recorded during the time block.

Standard Day Table

1.



Last 7 days			
Overall			
	mmol/L	SD	Tests
0:00 - 4:00	8.7	3.7	3
4:00 - 8:00	8.1	2.6	4
8:00 - 12:00	11.1	8.1	4
12:00 - 16:00	7.4	4.1	9

Back  Graph

▶ Press ▲ or ▼ to scroll screen.

2.

▶ To display a standard day table for another time range (last 7, 14, 30, 60, or 90 days), press ▲ to highlight the time range selection field (top of screen). Press either ▲ or ▶ until you reach the time range you need.

3.

▶ To display a standard day table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ▲ or ▶ until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

i NOTE

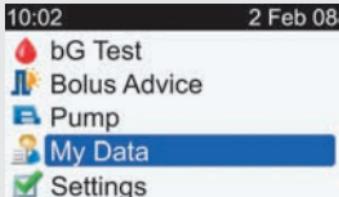
The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

Reporting Your Standard Week

The meter displays (for a standard week) your blood glucose averages, number of tests, and standard deviations for each day of the week for the time range you choose (last 7, 14, 30, 60, or 90 days).

Main Menu > My Data > Reports > Standard Week

1.



2.



3.

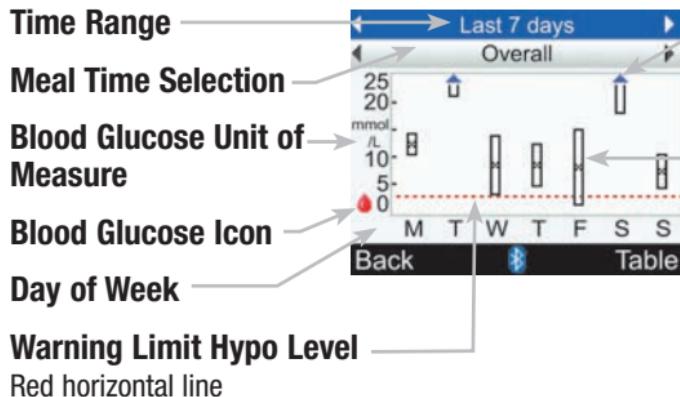


- ▶ From the Main Menu, select My Data and press .

- ▶ Select Reports and press .

- ▶ Select Standard Week and press .

Standard Week Graph Screen



Arrow

Indicates blood glucose average is off the top of the graph ("X" is not displayed)

Box for Each Time Block

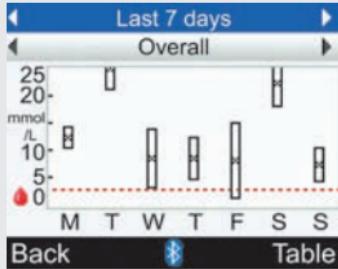
- "X" in centre of box indicates the average of all blood glucose test results for the selected criteria.
- The top of the box indicates 1 standard deviation above the average and the bottom of the box indicates 1 standard deviation below the average. The box is not displayed if there are not enough data to determine standard deviation.
- The top of box is open if the standard deviation is off the top of the graph.
- Box and "X" are not displayed for a day if no data are found.

i NOTE

- If data are not available to display the standard week graph, the No Data Available screen is displayed.
- The standard week graph does not include corrupt results, control results, HI values, or LO values.

Standard Week Graph

1.



- ▶ To display a standard week graph for another time range (last 7, 14, 30, 60, or 90 days), press Δ to highlight the time range selection field (top of screen). Press either \blacktriangleleft or \triangleright until you reach the time range you need.

2.

- ▶ To display a standard week graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either \blacktriangleup or \blacktriangledown to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either \blacktriangleleft or \triangleright until you reach the meal time selection you need.

3.

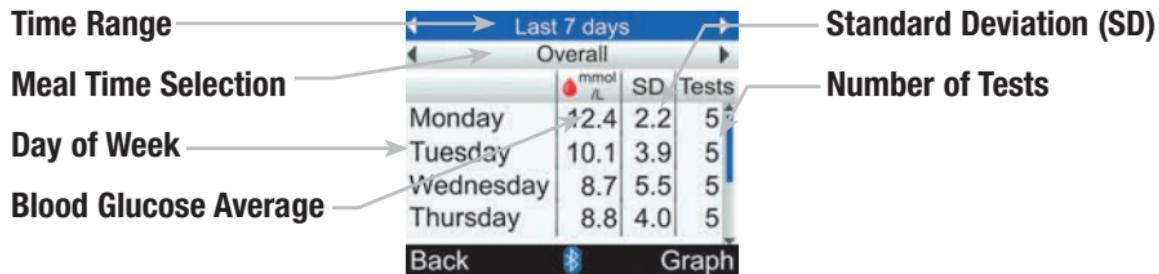
- ▶ Press \square to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

 **NOTE**

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Standard Week Table Screen



i **NOTE**

- If data are not available to display the standard week table, the No Data Available screen is displayed.
- Standard week table calculations do not include corrupt results, control results, or HI and LO results.
- For a standard deviation to be displayed for a given day of the week, there must have been two or more tests recorded during the day.

Standard Week Table

1.

Last 7 days			
Overall	mmol/L	SD	Tests
Monday	12.4	2.2	5
Tuesday	10.1	3.9	5
Wednesday	8.7	5.5	5
Thursday	8.8	4.0	5

- ▶ Press ▲ or ▼ to scroll screen.

2.

▶ To display a standard week table for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either ▲ or ▶ until you reach the time range you need.

3.

▶ To display a standard week graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either ▲ or ▼ to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either ▲ or ▶ until you reach the meal time selection you need.

4.

- ▶ Press  to display the Graph (see previous section for more information).

To return to the Reports screen, select Back.

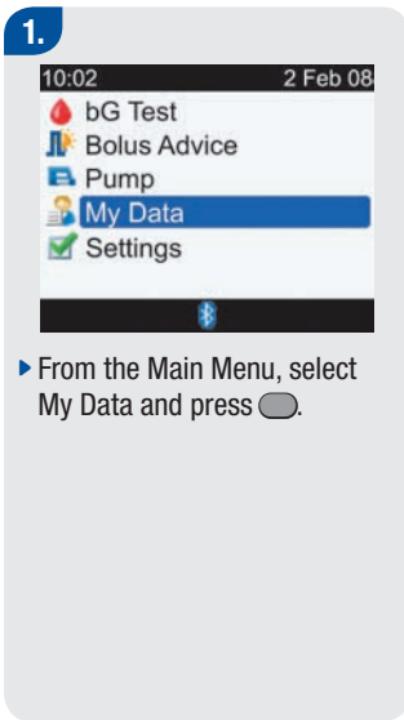
 **NOTE**

The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

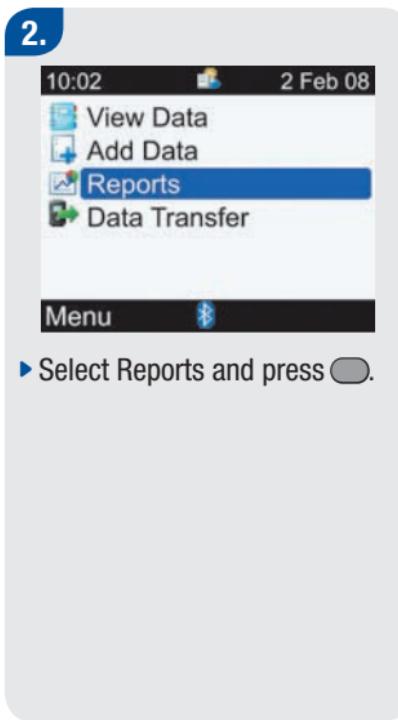
Reporting Your Target

The meter displays a pie chart illustrating your blood glucose records as “Above,” “Within,” “Below,” and “Hypo” for the time range you choose (last 7, 14, 30, 60, or 90 days).

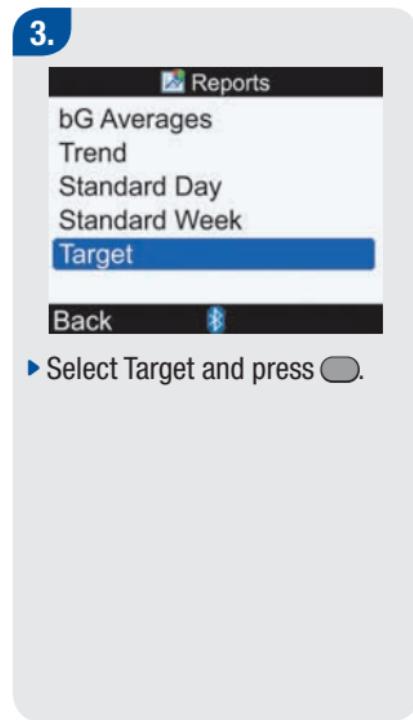
Main Menu > My Data > Reports > Target



- ▶ From the Main Menu, select My Data and press



- ▶ Select Reports and press



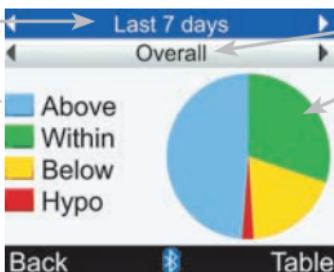
- ▶ Select Target and press

Target Graph Screen

Time Range

Legend

Blood glucose test result categories



Meal Time Selection

Pie Chart

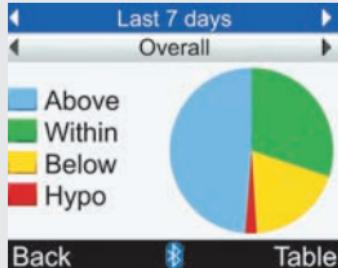
Represents the percentages for the blood glucose test result categories

i NOTE

- If data are not available to display the target graph, the No Data Available screen is displayed.
- The target graph does not include corrupt results, control results, or HI and LO results.

Target Graph

1.



- To display a target graph for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either **◀** or **▶** until you reach the time range you need.

2.

- To display a target graph for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either **▲** or **▼** to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either **◀** or **▶** until you reach the meal time selection you need.

3.

- Press **◀** to display the Table (proceed to the next section for more information).

To return to the Reports screen, select Back.

 **NOTE**

The meter saves the current settings (time range, meal time, and graph view) when you select Back or when the meter powers off.

Target Table Screen



NOTE

- If results or data are not available for the selected time period and meal time, the No Data Available screen is displayed.
- The target table does not include corrupt results, control results, or HI and LO results.

Target Table

1.



- ▶ To display a target table for another time range (last 7, 14, 30, 60, or 90 days), select the time range selection field (top of screen). Press either **◀** or **▶** until you reach the time range you need.

2.

- ▶ To display a target table for another meal time selection (Overall, Pre Meal, Post Meal, Bedtime, or Other), press either **▲** or **▼** to highlight the meal time selection field (immediately below the time range which is at the top of the screen). Press either **◀** or **▶** until you reach the meal time selection you need.

3.

- ▶ Press **◀** to display the Target Graph (see previous section for more information).

To return to the Reports screen, select Back.

 **NOTE**

The meter saves the current settings (time range, meal time, and table view) when you select Back or when the meter powers off.

4.5 Downloading Your Data to a Computer

You can transfer your stored results to a computer to track, identify patterns, and print.

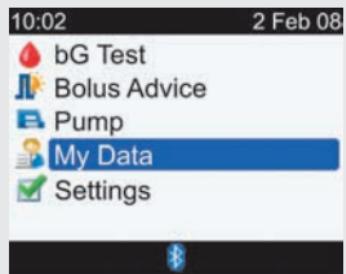
1.

- ▶ Install the software according to the instructions.
- ▶ Connect the computer cable according to the instructions.

2.

- ▶ Run the software programme and follow the instructions about how to download information. Ensure the software is ready to accept data from the meter.

3.



- ▶ From the Main Menu, select My Data and press .

4.

10:02 2 Feb 08

- View Data
- Add Data
- Reports
- Data Transfer**

Menu



- ▶ Select Data Transfer and press .

5.

Infrared (IR) Window



- ▶ Locate the infrared (IR) window on the top of the meter.
- ▶ Locate the IR window on the computer's infrared cable.
- ▶ Point the two IR windows toward each other. They should be 3 to 10 cm apart.

6.

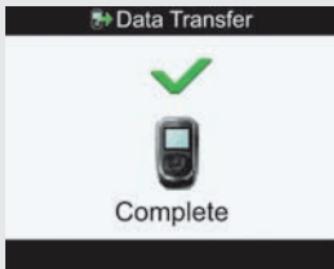
 Data Transfer



Transferring Data

- ▶ Follow the prompts on your computer software to start the data transfer.

7.



- Once the data transfer is complete, the Data Transfer Complete screen is displayed for 3 seconds and then the meter turns off.

i NOTE

If the data did not transfer successfully, turn off the meter, turn the meter back on, and try again. If you still have problems, contact Roche.

5 Changing Meter Settings

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5.1 Overview

You have the flexibility to change the Accu-Chek Aviva Combo Meter settings that you initially selected during the Setup Wizard process. You can make adjustments to the meter settings in order to meet changing conditions. Consult with your healthcare professional to ensure the appropriate settings are selected.

Settings: Important Information

- When editing a setting, any unsaved changes are discarded if the meter turns off or if a test strip is inserted into the meter.
- It is important to ensure that the time and date are correctly set in order to create accurate diary records.
- If you change the pump time and date, the meter time and date will automatically synchronize to match the pump.

 **NOTE**

Blood glucose and bG are interchangeable and mean the same thing.

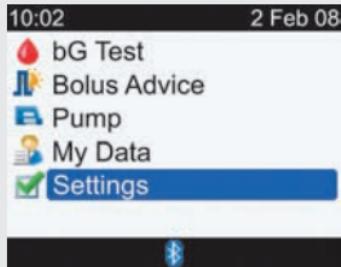
5.2 Setting bG Test Reminders: After High bG, After Low bG, After Meal

bG Test Reminders: Important Information

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
 - Dismiss the reminder by pressing .
 - Reschedule (snooze) the reminder by pressing . The snooze time for After High bG is 15 minutes. The snooze time for After Low bG and After Meal is 5 minutes.
 - If not dismissed or snoozed, the reminder is displayed a total of four times at intervals of 2 minutes, after which the meter dismisses the reminder.
- When you perform a blood glucose test, the meter dismisses any bG test reminders which are pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.
- For more information, see Chapter 6, “Icons, Reminders, Warnings, and Errors.”

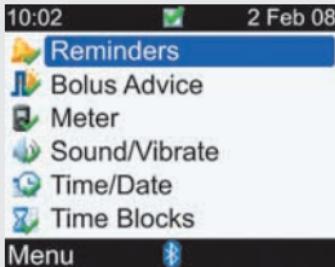
Main Menu > Settings > Reminders > bG Test Reminders

1.



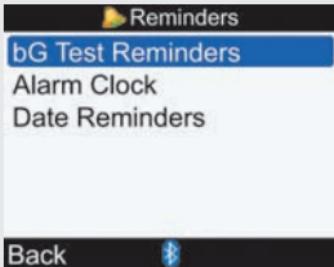
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Reminders and press .

3.



- ▶ Select bG Test Reminders and press .

4.



- ▶ Select either After High bG, After Low bG, or After Meal and press .
- ▶ Proceed to either After High bG, After Low bG, or After Meal in this step.



To Turn the After High bG Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Change the bG Threshold:

- ▶ Select the bG Threshold entry field and press .
- ▶ Set the bG Threshold level and press .

To Change the Remind After Time:

- ▶ Select the Remind After entry field and press .
- ▶ Set the amount of time after a high blood glucose test result you want to be reminded to retest your blood glucose and press .

To save the changes and return to the bG Test Reminders screen, select Save.



To Turn the After Low bG

Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Change the bG Threshold:

- ▶ Select the bG Threshold entry field and press .
- ▶ Set the bG Threshold level and press .

To Change the Remind After

Time:

- ▶ Select the Remind After entry field and press .
- ▶ Set the amount of time after a low blood glucose test result you want to be reminded to retest your blood glucose and press .

To save the changes and return to the bG Test Reminders screen, select Save.



To Turn the After Meal

Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

To Change the Snack Size:

- ▶ Select the Snack Size entry field and press .
- ▶ Set the Snack Size amount and press .

To Change the Remind After Time:

- ▶ Select the Remind After entry field and press .
- ▶ Set the amount of time after a meal (carb entry larger than the snack size) you want to be reminded to retest your blood glucose and press .

To save the changes, select Save.

If you did not change the Snack Size, the meter returns to the bG Test Reminders screen.

 After Meal

New Snack Size has also been applied to Bolus Advice Options



OK

If you changed the Snack Size, the After Meal screen is displayed.

- ▶ Select OK to return to the bG Test Reminders screen.

NOTE

- Remind After is displayed as “HH:MM” (e.g., 1:30) where “H” is hour and “M” is minute.
- When the meter is displaying the Remind After Meal screen for the first time, if bolus advice has not been set up, the default for Snack Size is no entry (“---g”). If bolus advice has been set up, the default value is the value set for the Snack Size on the Advice Options screen.
- To cancel changes or to return to the previous screen, select Cancel.

5.3 Setting Alarm Clock Reminders: bG Test, Other

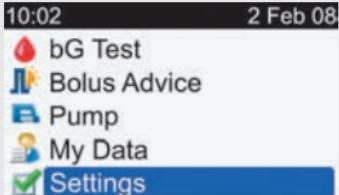
Alarm clock reminders are a helpful way to remind you to test your blood glucose, or for any other daily appointment. You can set up to eight reminders per day.

Alarm Clock Reminders: Important Information

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled (and no blood glucose test was performed for an Alarm Clock bG Test Reminder), the reminder is displayed when the meter powers down.
 - Alarm Clock bG Test: Dismiss the reminder by pressing . Reschedule (snooze) the reminder for 15 minutes by pressing .
 - Alarm Clock Other: Dismiss the reminder either by pressing  or by inserting a test strip. Reschedule (snooze) the reminder for 15 minutes by pressing .
- If not dismissed or snoozed, the reminder is displayed a total of four times at intervals of 2 minutes, after which the meter dismisses the reminder.
- When you perform a blood glucose test, the meter dismisses Alarm Clock bG Test reminders which are pending within the next 30 minutes.
- For more information, see Chapter 6, “Icons, Reminders, Warnings, and Errors.”

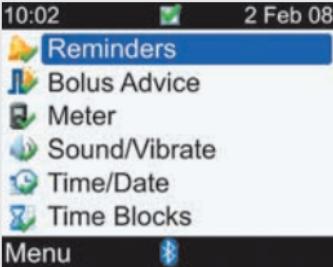
Main Menu > Settings > Reminders > Alarm Clock

1.



- ▶ From the Main Menu, select Settings and press .

2.

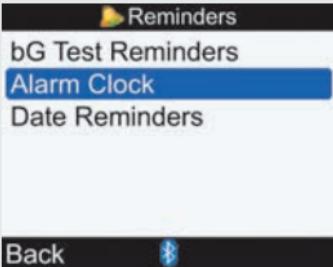


Menu



- ▶ Select Reminders and press .

3.



Back



- ▶ Select Alarm Clock and press .



To Turn On or Change a Reminder:

- ▶ Select the time entry field for a Reminder and press .
- ▶ Set the time to schedule the Reminder and press .
- ▶ Press . Select the type of Reminder (i.e., bG Test or Other) and press .
- ▶ Repeat the above steps to set additional reminders.

To Turn Off a Reminder:

- ▶ Select the type of Reminder entry field (i.e., bG Test or Other) and press .
- ▶ Select Off and press .
- ▶ Repeat the above steps to turn off additional reminders.

To save the changes and return to the Reminders screen, select Save.

NOTE

- To cancel changes or return to the Reminders screen, select Cancel.
- Time for the Alarm Clock reminders can be set in 15-minute increments, where “HH” is hour, “MM” is minutes, and with “am” or “pm” for the 12-hour format.
- If you tested within 30 minutes of a bG Test Reminder, the reminder does not occur.
- Exposure to extreme cold conditions may disable Alarm Clock reminders until the meter is turned on.

5.4 Setting Date Reminders: Dr. Visit, Lab Test, Infusion Set Change

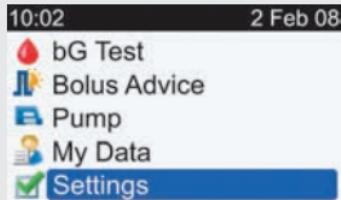
Date reminders are a helpful way to remind you of an upcoming Dr. visit or lab test. In addition, you can set up an ongoing reminder for an infusion set change for the interval you choose (1 day, 2 days, or 3 days).

Date Reminders: Important Information

- Displayed when you turn on the meter and a test strip has not been inserted.
- Dismiss the reminder either by pressing  or by inserting a test strip.
- For more information, see Chapter 6, “Icons, Reminders, Warnings, and Errors.”

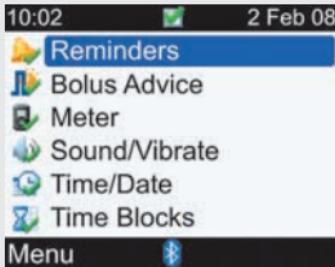
Main Menu > Settings > Reminders > Date Reminders

1.



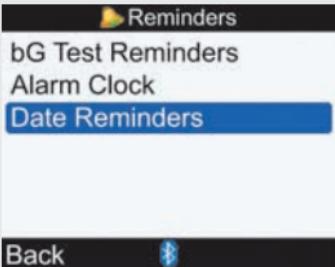
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Reminders and press .

3.



- ▶ Select Date Reminders and press .

4.

 Date Reminders

Dr. Visit	Off
Lab Test	Off
Infusion Set Change	Off

Back 

- ▶ Select either Dr. Visit, Lab Test, or Infusion Set Change and press .
- ▶ Proceed to either Dr. Visit, Lab Test, or Infusion Set Change in this step.

 Dr. Visit

Reminder	Off
Appointment Date/Time	
Date	2 Feb 08 DD MMM YY
Time (Optional)	10:00 HH MM

Cancel  Save

To Turn the Dr. Visit Reminder On or Off:

- ▶ Select the Reminder entry field and press .
- ▶ Select On or Off and press .

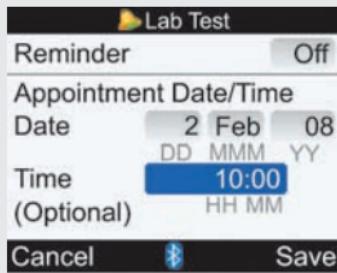
To Set the Date:

- ▶ Select the Date entry field and press .
- ▶ Set the Day and press .
- ▶ Set the Month and press .
- ▶ Set the Year and press .

To Set the Time (Optional):

- ▶ Select the Time entry field and press .
- ▶ Set the Time and press .

To save the changes and return to the Date Reminders screen, select Save.



To Turn the Lab Test Reminder On or Off:

- ▶ Select the Reminder entry field and press
- ▶ Select On or Off and press

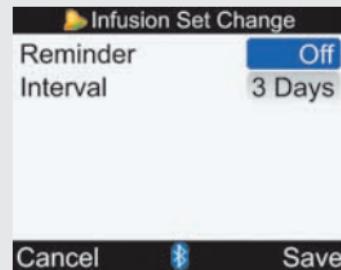
To Set the Date:

- ▶ Select the Date entry field and press
- ▶ Set the Day and press
- ▶ Set the Month and press
- ▶ Set the Year and press

To Set the Time (Optional):

- ▶ Select the Time entry field and press
- ▶ Set the Time and press

To save the changes and return to the Date Reminders screen, select Save.



To Turn the Infusion Set Change Reminder On or Off:

- ▶ Select the Reminder entry field and press
- ▶ Select On or Off and press

To Set the Interval:

- ▶ Select the Interval entry field and press
- ▶ Select the Interval (1 day, 2 days, or 3 days) and press

To save the changes and return to the Date Reminders screen, select Save.

 **NOTE**

- Setting a time for a Date Reminder is optional. If you choose not to set a time, ensure the Time entry field value is “--:--” (no entry).
- To cancel changes or to return to the Date Reminders screen, select Cancel.
- Time for the Dr. Visit Reminder and the Lab Test Reminder can be set in 15-minute increments, where “HH” is hour, “MM” is minutes, and with “am” or “pm” for the 12-hour format.
- Date Reminders do not automatically turn on the meter and display the Reminder. Date Reminders only occur when you power on the meter on the appropriate date.

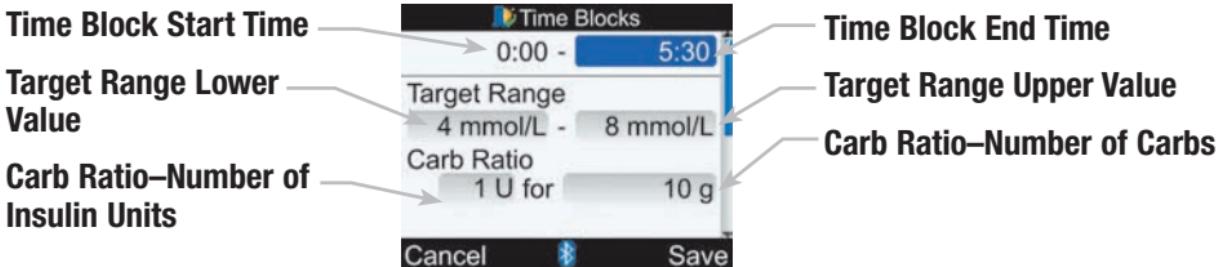
5.5 Setting Bolus Advice for the First Time

Set Up Bolus Advice

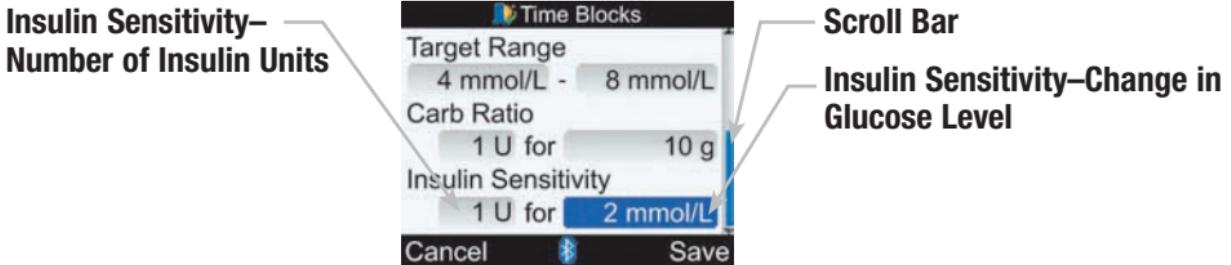
If you did not set up bolus advice when you went through the Setup Wizard and have now decided to utilize bolus advice, proceed with this section. Once you do set up bolus advice, you cannot turn it off.

It is suggested that you review the information in the Getting Started Guide before continuing. Prior to setting up time blocks for bolus advice, it is recommended that you decide how many time blocks you need and also determine the start/end times. Talk to your healthcare professional about arranging your time blocks to help best manage your diabetes. For each time block, you can set up different blood glucose target ranges, carb ratios, and insulin sensitivities to accommodate your differing insulin needs throughout the day.

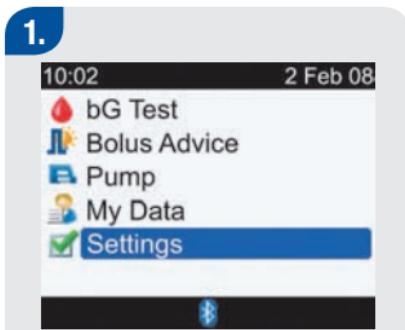
Time Blocks > Bolus Advice Screen



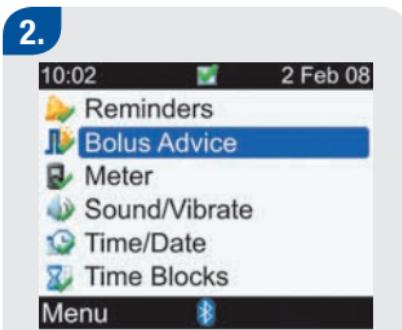
scroll down



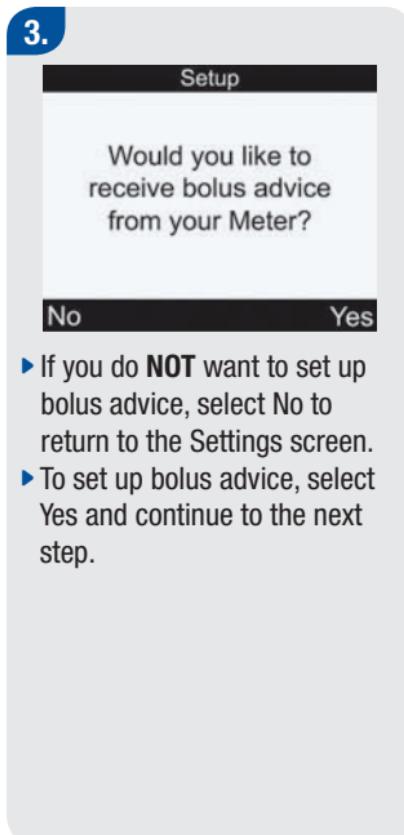
Main Menu > Settings > Bolus Advice



- ▶ From the Main Menu, select Settings and press .



- ▶ Select Bolus Advice and press .



- ▶ If you do **NOT** want to set up bolus advice, select No to return to the Settings screen.
- ▶ To set up bolus advice, select Yes and continue to the next step.

4.

Setup

Edit at least one time block by selecting a time block and pressing enter

Back

Next

- ▶ To continue, select Next.

5.

Time Blocks

Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00

Back



To Change Time Blocks:

- ▶ Select a time block to edit and press .

Time Blocks

0:00 - 5:30

Target Range

4 mmol/L - 8 mmol/L

Carb Ratio

1 U for 10 g

Cancel



Save

scroll down

Time Blocks

Target Range

4 mmol/L - 8 mmol/L

Carb Ratio

1 U for 10 g

Insulin Sensitivity

1 U for 2 mmol/L

Cancel



Save

To Change the End Time:

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

Time Blocks

Settings copied to all Time Blocks. Adjust as necessary.

OK

The carb ratio and insulin sensitivity are copied to all time blocks. You may edit the target range, carb ratio, and insulin sensitivity for any other time block, if necessary.

▶ Select OK.

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

To Change the Carb Ratio:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the amount of Carbs and press .
- ▶ Set the amount of Carbs covered by the number of Insulin Units and press .

To Change the Insulin Sensitivity:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the Insulin Sensitivity level and press .
- ▶ Set the Insulin Sensitivity level and press .
- ▶ Select Save.

7.

Time Blocks	
Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00

Back  Next

- ▶ Return to Step 5 to change another Time Block.
- ▶ Continue in order to add or remove Time Blocks, otherwise select Next and proceed to Step 8.

To Add a Time Block:

- ▶ Select the **last** time block and press .

Time Blocks	
21:30 -	0:00
Target Range	
4 mmol/L -	8 mmol/L
Carb Ratio	
1 U for	10 g

Cancel  Save

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time of the selected time block and press .
- ▶ This will be the start time of the added time block.
- ▶ To save the changes and return to the Time Blocks screen, select Save.
- ▶ Add another Time Block, or proceed to Step 8.

To Remove a Time Block:

- ▶ Select the Time Block you want to remove and press .

Time Blocks	
0:00 -	5:30
Target Range	
4 mmol/L -	8 mmol/L
Carb Ratio	
1 U for	10 g

Cancel  Save

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time to match the start time of the Time Block and press .
- ▶ To save the changes and return to the Time Blocks screen, select Save.
- ▶ Remove another Time Block, or proceed to Step 8.

8.

Health Events	
Exercise 1	-10%
Exercise 2	-20%
Stress	0%
Illness	20%
Premenstrual	0%

Back

Next

To Change the Health Events:

- ▶ Select the entry field of the Health Event to be changed and press .
- ▶ Set the percentage and press .
- ▶ Repeat the previous steps to change another Health Event.
- ▶ To continue, select Next.

9.

Advice Options	
Meal Rise	6 mmol/L
Snack Size	24 g
Acting Time	4:00
Offset Time	1:00
	HH MM

Cancel



Save

To Change the Meal Rise:

- ▶ Select the Meal Rise entry field and press .
- ▶ Set the Meal Rise limit and press .

To Change the Snack Size:

- ▶ Select the Snack Size entry field and press .
- ▶ Set the Snack Size amount and press .

To Change the Acting Time:

- ▶ Select the Acting Time entry field and press .
- ▶ Set the Acting Time duration and press .

To Change the Offset Time:

- ▶ Select the Offset Time entry field and press .
- ▶ Set the Offset Time duration and press .

To save the changes and exit, select Save.

10.

 Advice Options

New Snack Size has
also been applied to
After Meal Reminder



OK

- ▶ Select OK.

11.

 Bolus Advice

Time Blocks
Health Events
Advice Options

Back



- ▶ To return to the Settings
screen, select Back.

Bolus Advice Options

Meal Rise, Snack Size, Acting Time, and Offset Time are Bolus Advice Options. Below are detailed descriptions of each of these settings.

Meal Rise

During or after meals, an increase in blood glucose levels is considered normal within a certain range, even though a meal bolus has been delivered. Enter the maximum increase in your blood glucose test result that is to be tolerated without an additional correction bolus.

Snack Size

The snack size is the amount of carbohydrates that is not to be counted as a regular meal with the expected meal rise. In this case (in contrast to regular meals), an increase in your blood glucose test result is not tolerated since the meal rise factor is not triggered for bolus advice calculations.

Acting Time

The acting time is the period of time from the start of the meal rise or the delivery of a correction bolus until your blood glucose level is expected to return to the target level. You can adjust the length of the acting time to your individual needs, within a specified time interval (1½ hours to 8 hours).

Offset Time

Offset time takes into account the expected delay for the blood glucose level to actually fall during the acting time of insulin in the body.

5.6 Setting Time Blocks, Health Events, Advice Options: Bolus Advice Set Up

If bolus advice has been set up, use this section for:

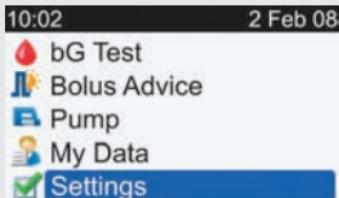
- Adding or removing time blocks
- Changing the time of day when time blocks occur
- Changing the values for target range, carb ratio, and insulin sensitivity for any time block
- Changing health event percentages
- Changing advice options (meal rise, snack size, acting time, offset time)

Before continuing, it is recommended that you review the Getting Started Guide, determine how many time blocks you need, and determine the start/end times for each time block. To help best manage your diabetes, talk to your healthcare professional about arranging your time blocks, including setting up different blood glucose target ranges, carb ratios, and insulin sensitivities for each time block.

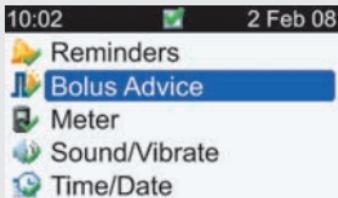
Setting Time Blocks—Bolus Advice is Set Up

Main Menu > Settings > Bolus Advice > Time Blocks

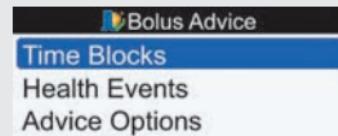
1.



2.



3.



► From the Main Menu, select Settings and press .

► Select Bolus Advice and press .

► Select Time Blocks and press .

4.

Time Blocks	
Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00

Back



To Add or Remove Time Blocks:

If you do not need to add or remove time blocks, then proceed to “To Change the Time Blocks.”

To Add a Time Block:

- ▶ Select the **last** time block and press .

Time Blocks	
21:30 -	0:00
Target Range	
4 mmol/L -	8 mmol/L
Carb Ratio	
1 U for	10 g

Cancel



Save

- ▶ Select the **End Time** entry field and press .
- ▶ Set the **End Time** of the selected Time Block and press .
- ▶ This will be the **start time** of the added time block.
- ▶ To save the changes and return to the Time Blocks screen, select **Save**.
- ▶ Proceed to “To Change the Time Blocks.”

To Remove a Time Block:

- ▶ Select the Time Block you want to remove and press .

Time Blocks	
0:00 -	5:30
Target Range	
4 mmol/L -	8 mmol/L
Carb Ratio	
1 U for	10 g

Cancel

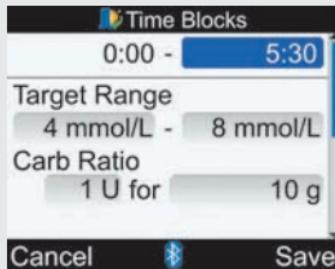


Save

- ▶ Select the **End Time** entry field and press .
- ▶ Set the **End Time** to match the **start time** of the Time Block and press .
- ▶ To save the changes and return to the Time Blocks screen, select **Save**.
- ▶ Proceed to “To Change the Time Blocks.”

To Change the Time Blocks:

- ▶ Select a Time Block to edit and press .



To Change the End Time:

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

To Change the Carb Ratio:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the amount of Carbs and press .
- ▶ Set the amount of Carbs covered by the selected units of insulin and press .

To Change the Insulin Sensitivity:

- ▶ Select the entry field for the number of Insulin Units and press .
- ▶ Set the number of Insulin Units and press .
- ▶ Select the entry field for the Insulin Sensitivity level and press .
- ▶ Set the Insulin Sensitivity level and press .
- ▶ Select Save.

6.

Time Blocks	
Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00

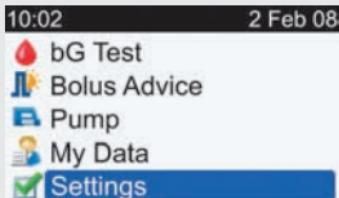
Back 

- ▶ To change another time block, select the time block and press . Return to Step 5.
- ▶ To return to the Bolus Advice screen, select Back.

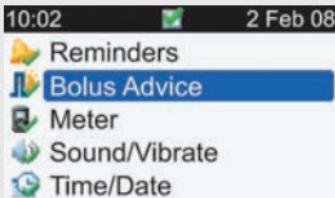
Setting Health Events—Bolus Advice is Set Up

Main Menu > Settings > Bolus Advice > Health Events

1.



2.



3.

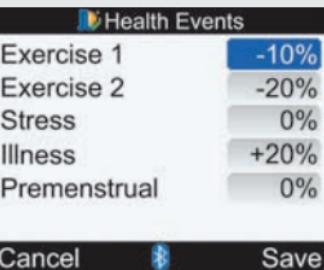


- ▶ From the Main Menu, select Settings and press .

- ▶ Select Bolus Advice and press .

- ▶ Select Health Events and press .

4.

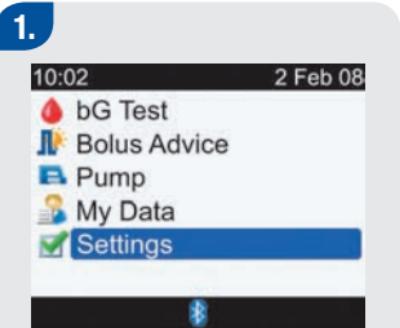
**To Change the Health Events:**

- ▶ Select the entry field of the Health Event to be changed and press .
- ▶ Set the percentage and press .
- ▶ Repeat the previous steps to change other Health Events.

To save the changes and return to the Bolus Advice screen, select Save.

Setting Bolus Advice Options—Bolus Advice is Set Up

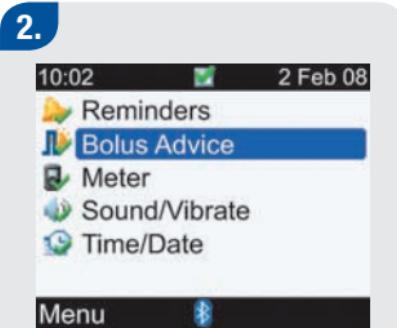
Main Menu > Settings > Bolus Advice > Advice Options

- 

1. 10:02 2 Feb 08

 - bG Test
 - Bolus Advice
 - Pump
 - My Data
 - Settings**

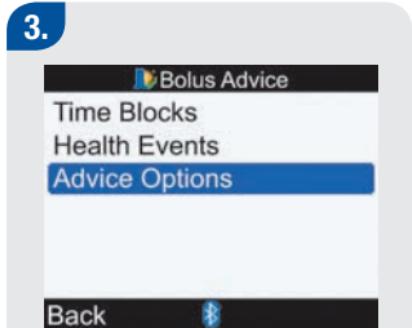
Bluetooth icon

▶ From the Main Menu, select Settings and press .
- 

2. 10:02 2 Feb 08

 - Reminders
 - Bolus Advice**
 - Meter
 - Sound/Vibrate
 - Time/Date

Menu Bluetooth icon

▶ Select Bolus Advice and press .
- 

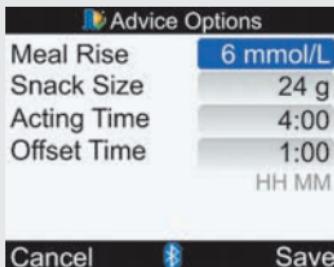
3. Bolus Advice

 - Time Blocks
 - Health Events
 - Advice Options**

Back Bluetooth icon

▶ Select Advice Options and press .

4.



To Change the Meal Rise:

- ▶ Select the Meal Rise entry field and press .
- ▶ Set the Meal Rise limit and press .

To Change the Snack Size:

- ▶ Select the Snack Size entry field and press .
- ▶ Set the Snack Size amount and press .

To Change the Acting Time:

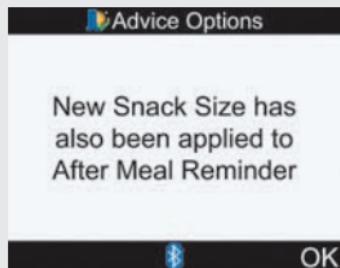
- ▶ Select Acting Time entry field and press .
- ▶ Set the Acting Time duration and press .

To Change the Offset Time:

- ▶ Select the Offset Time entry field and press .
- ▶ Set the Offset Time duration and press .

To save the changes, select Save.

If you did not change the Snack Size, the meter returns to the Bolus Advice screen.



If you changed the Snack Size, the meter displays the Advice Options screen.

- ▶ Select OK to return to the Bolus Advice screen.

5.7 Setting Warning Limits: Hyper, Hypo

You can set blood glucose warning limits for hyperglycaemia (Hyper) or hypoglycaemia (Hypo) conditions. Once these blood glucose limit values have been set, if your test result is above the hyper warning limit, the meter displays the Above Hyper Warning Limit message: "Consider checking for ketones, bG and insulin regularly." If your test result is below the hypo warning limit, the meter displays the Below Hypo Warning Limit message: "Eat fast carbs of at least (number of carbs)¹ Retest bG."

¹The meter displays a recommended amount of fast carbohydrates.

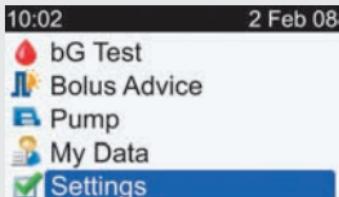


WARNING

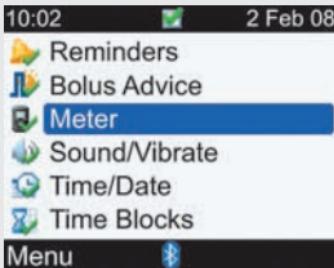
This function is no substitute for hyperglycaemia or hypoglycaemia training by your healthcare professional.

Main Menu > Settings > Meter > Warning Limits

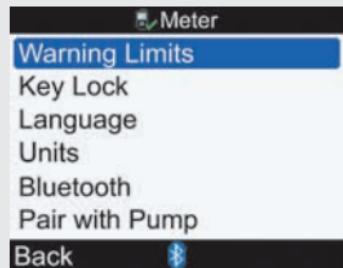
1.



2.



3.



► From the Main Menu, select Settings and press .

► Select Meter and press .

► Select Warning Limits and press .

4.



To save the changes and return to the Meter Menu screen, select Save.

To Change the Hyper Blood Glucose Level:

- ▶ Select the Hyper entry field and press .
- ▶ Set the Hyper (upper) blood glucose level and press .

To Change the Hypo Blood Glucose Level:

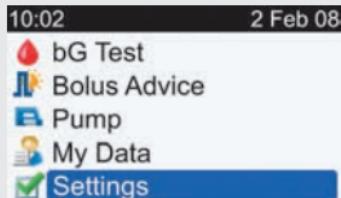
- ▶ Select the Hypo entry field and press .
- ▶ Set the Hypo (lower) blood glucose level and press .

5.8 Turning Key Lock On or Off

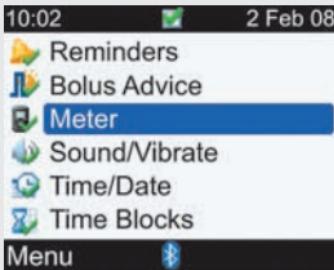
The key lock feature allows you to lock all of the buttons on the meter, except for the power on/off button. This serves as a safety measure against unintentional activation of meter functions.

Main Menu > Settings > Meter > Key Lock

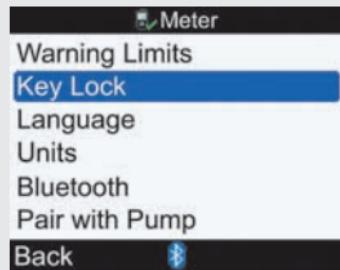
1.



2.



3.

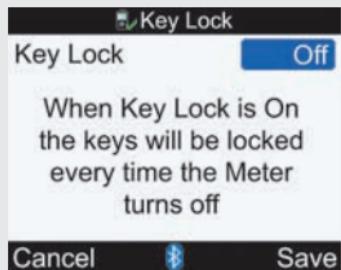


► From the Main Menu, select Settings and press .

► Select Meter and press .

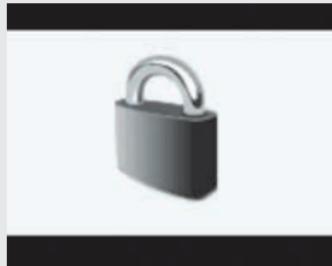
► Select Key Lock and press .

4.



- ▶ Press  to display the Key Lock pop-up menu.
- ▶ Select On or Off.

To save the change and return to the Meter Menu screen, select Save.



If the buttons are locked when you turn on the meter, the Key Lock screen is displayed.

- ▶ To unlock the buttons, press and hold  and  at the same time until the Main Menu is displayed.

The buttons remain unlocked for the current session. When the meter is turned on again, the buttons are locked.

Key Lock: Important Information

- ▶ When the buttons are locked, you can still turn the meter on and off. You can also adjust the backlight.
- ▶ The buttons are unlocked when:
 - A test strip is inserted into the meter
 - The meter is turned on and a pump error or a pump warning occurs

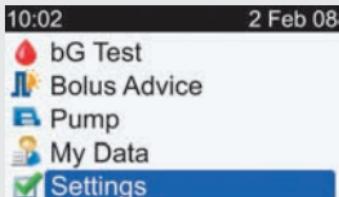
For these occurrences, the buttons remain unlocked for the current session. When the meter is turned on again, the buttons are locked.

5.9 Setting the Language

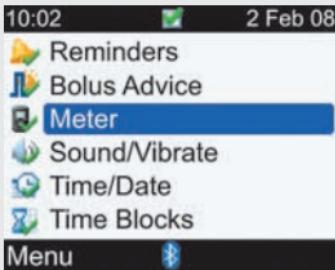
You can select a language from the predefined list.

Main Menu > Settings > Meter > Language

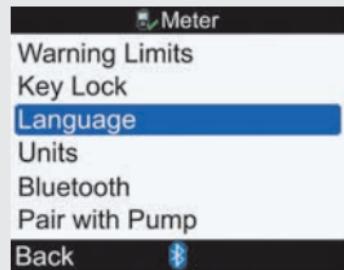
1.



2.



3.



► From the Main Menu, select Settings and press .

► Select Meter and press .

► Select Language and press .

4.



- ▶ Press  to display the Language options.
- ▶ Select the desired Language and press .

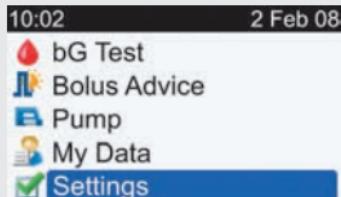
To save the change and return to the Meter Menu screen, select Save.

5.10 Setting Units: Carbs

You can set up the meter for different carbohydrate (carbs) units (Grams, BE, KE, or CC).

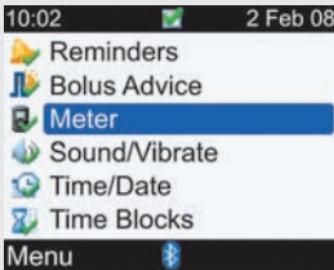
Main Menu > Settings > Meter > Units

1.



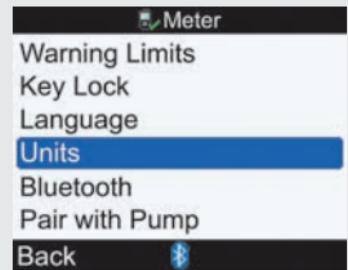
- ▶ From the Main Menu, select Settings and press .

2.



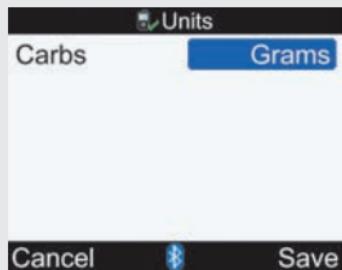
- ▶ Select Meter and press .

3.



- ▶ Select Units and press .

4.

**i NOTE**

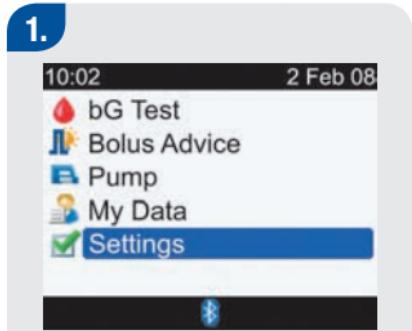
For more information on the units for carbohydrates and carbohydrate equivalents, see Appendix B, “Carb Units.”

- ▶ Press  to display the list of units for carbs.
- ▶ Select the units (Grams, BE, KE, or CC) and press .

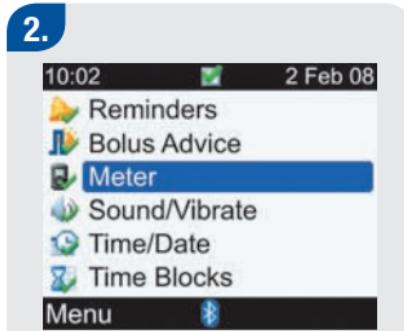
To save the change and return to the Meter Menu screen, select Save.

5.11 Turning *Bluetooth*® Wireless Technology On or Off

Main Menu > Settings > Meter > Bluetooth

- 

1. The screen shows the Main Menu with the following options: bG Test, Bolus Advice, Pump, My Data, and Settings. The Settings option is highlighted with a blue bar. At the bottom is a blue bar with a white Bluetooth icon.

▶ From the Main Menu, select Settings and press .
- 

2. The screen shows the Settings menu with the following options: Reminders, Bolus Advice, Meter, Sound/Vibrate, Time/Date, Time Blocks, and Menu. The Meter option is highlighted with a blue bar. At the bottom is a blue bar with a white Bluetooth icon.

▶ Select Meter and press .
- 

3. The screen shows the Meter sub-menu with the following options: Warning Limits, Key Lock, Language, Units, Bluetooth, Pair with Pump, and Back. The Bluetooth option is highlighted with a blue bar. At the bottom is a blue bar with a white Bluetooth icon.

▶ Select Bluetooth and press .

4.



Press and hold backlight button until Bluetooth icon changes

Meter Name: METER12345678

Back 

- ▶ To turn *Bluetooth* wireless technology either On or Off, press and hold  until the *Bluetooth* wireless technology icon changes. Release .

To save the change and return to the Meter Menu screen, select Back.

5.12 Pairing the Meter and Pump

For complete pairing instructions, see the Advanced Owner's Booklet.

5.13 Setting the Beeper, Vibrate, and Key Sound

You can set up the meter for sound mode and/or vibration mode. The meter features different sound (beeper) tones. Sounds may occur for:

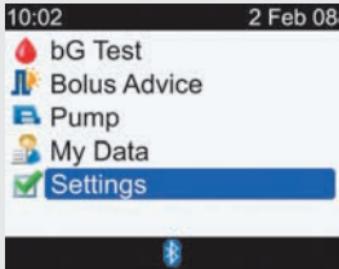
- Button presses
- Errors
- Warnings
- Reminders

NOTE

- Beeper and vibrate cannot both be turned off at the same time.
- When Key Sound is on, the meter beeps each time a button is pressed.
- Even when the beeper is turned off, the meter still beeps when an error message occurs.
- When in the low battery condition, the meter uses the medium beeper level (if the beeper level is set to high) and disables vibrate. In the low battery condition, the main menu screen will continue to display the icons for vibration and beeper, unless you have set them to Off. After the batteries are replaced with new ones, the meter returns to the beeper/vibrate settings you have set.

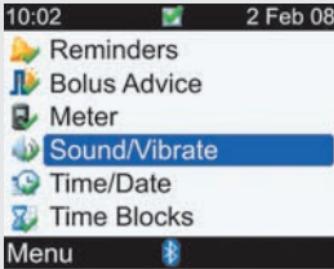
Main Menu > Settings > Sound/Vibrate

1.



- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Sound/Vibrate and press .

3.



To Change the Beeper Sound Level:

- ▶ Select the Beeper entry field and press .
- ▶ Select the Beeper Sound Level (Off, Low, Medium, or High) and press .

To Turn the Vibration On or Off:

- ▶ Select the Vibrate entry field and press .
- ▶ Select the Vibration mode (On or Off) and press .

To Change the Key Sound:

- ▶ Select the Key Sound entry field and press .
- ▶ Select the Key Sound mode (On or Off) and press .

To save the changes and return to the Settings Menu screen, select Save.

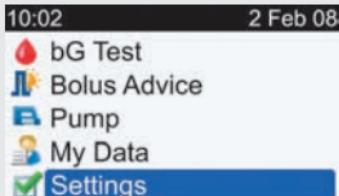
5.14 Setting the Time Format, Time, and Date

NOTE

- It is recommended you set the date and time on the pump (the date and time on the meter will automatically synchronize to match the pump).
- Changing the date and time will impact the Trend Graph and the Trend Table (see “Reporting Your Data Trends” in Section 4.4, “Reporting Your Data”).
- For 12-hour time format, time is displayed as “HH:MM A/P” (example: 3:53 pm) and for 24-hour time format, time is displayed as “HH:MM” (example: 15:53) where “H” is hour and “M” is minute.
- The date format is displayed as “DD MMM YY” (example: 02 Feb 08) where “D” is day, “M” is month, and “Y” is year.

Main Menu > Settings > Time/Date

1.



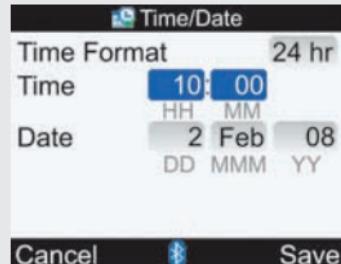
- ▶ From the Main Menu, select Settings and press .

2.



- ▶ Select Time/Date and press .

3.



To Change the Time Format:

- ▶ Select the Time Format entry field and press .
- ▶ Select 12-hr or 24-hr Time Format and press .

To Change the Time:

- ▶ Select the Time entry field and press .
- ▶ Set the Hour and press .
- ▶ Set the Minutes and press .
- ▶ If Time Format is 12-hour, select am or pm and press .

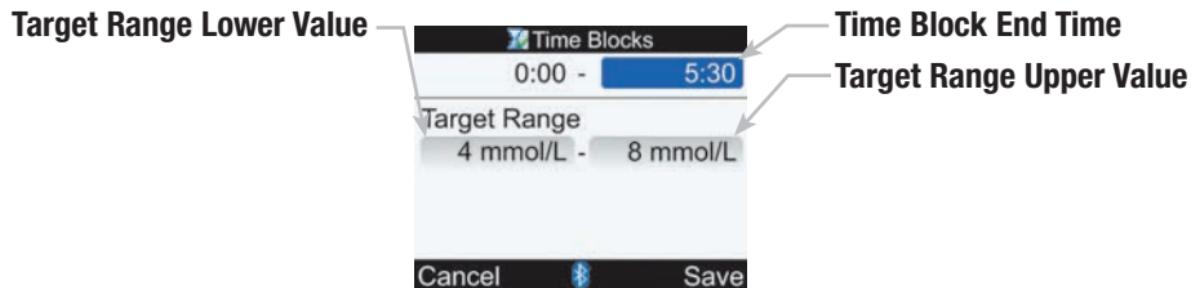
To Change the Date:

- ▶ Select the Date entry field and press .
- ▶ Set the Day and press .
- ▶ Set the Month and press .
- ▶ Set the Year and press .

To save the changes and return to the Settings Menu screen, select Save.

5.15 Setting Time Blocks: Bolus Advice Not Set Up

This section is for changing, adding, and removing time blocks only if bolus advice has not been set up. For each time block, you can set up different blood glucose target ranges. It is suggested that you review the Getting Started Guide before continuing. Prior to setting up time blocks, it is recommended that you determine how many time blocks you need and also determine the start/end times. Talk to your healthcare professional about arranging your time blocks in order to help best manage your diabetes.



Change End Time, Target Range Lower Value, and/or Target Range Upper Value

Main Menu > Settings > Time Blocks

1.

10:02 2 Feb 08

-  bG Test
-  Bolus Advice
-  Pump
-  My Data
-  Settings



- ▶ From the Main Menu, select Settings and press .

2.

10:02  2 Feb 08

-  Reminders
-  Bolus Advice
-  Meter
-  Sound/Vibrate
-  Time/Date
-  Time Blocks

Menu



Time Blocks does not appear if bolus advice has been set up.

- ▶ Select Time Blocks and press .

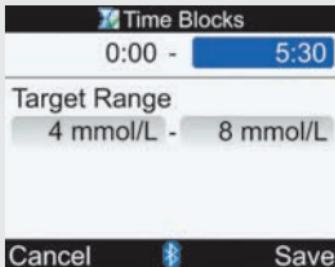
3.

 Time Blocks

Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00
Back	

- ▶ Select the time block to edit and press .

4.



To Change the End Time:

- ▶ Select the End Time entry field and press .
- ▶ Set the End Time and press .

To Change the Target Range:

- ▶ Select the entry field for the lower value of the Target Range and press .
- ▶ Set the value and press .
- ▶ Select the entry field for the upper value of the Target Range and press .
- ▶ Set the value and press .

5.

Time Blocks	
Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00
Back	

- ▶ Repeat Steps 3 and 4 to change another time block. Otherwise, select Back to return to the Settings screen.

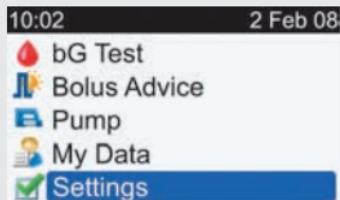
 **NOTE**

- When you set the end time, the meter sets this end time as the start time for the next time block.
- The end time can be set in 30-minute increments.
- To cancel changes press .

Add a Time Block

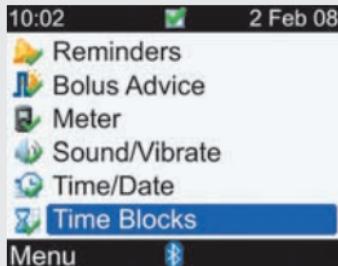
Main Menu > Settings > Time Blocks

1.



- ▶ From the Main Menu, select Settings and press .

2.



Menu

Time Blocks does not appear if bolus advice has been set up.

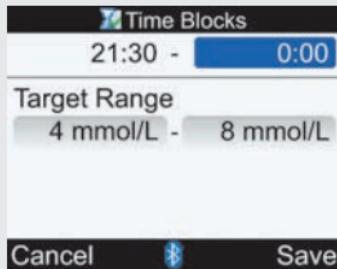
- ▶ Select Time Blocks and press .

3.

Time Blocks	
Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00
Back	

- ▶ Select the **last** time block and press .

4.



- ▶ Select the End Time entry field and press .
- ▶ Set the End Time of the selected Time Block and press . This will be the start time of the added time block.

To save the changes and return to the Time Blocks screen, select Save.

5.

- ▶ Update the End Times and Target Ranges for all time blocks, as needed. See “Change End Time, Target Range Lower Value, and/or Target Range Upper Value” in this section.

Remove a Time Block

Main Menu > Settings > Time Blocks

1.

10:02 2 Feb 08

- bG Test
- Bolus Advice
- Pump
- My Data
- Settings



- ▶ From the Main Menu, select Settings and press .

2.

10:02 2 Feb 08

- Reminders
- Bolus Advice
- Meter
- Sound/Vibrate
- Time/Date
- Time Blocks

Menu



Time Blocks does not appear if bolus advice has been set up.

- ▶ Select Time Blocks and press .

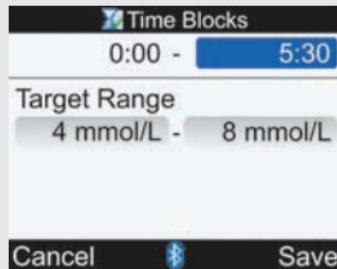
3.

Time Blocks

Start	End
0:00	5:30
5:30	11:00
11:00	17:00
17:00	21:30
21:30	0:00
Back	

- ▶ Select the Time Block you want to remove and press .

4.



- ▶ Select the End Time entry field and press .
- ▶ Set the End Time to match the start time of the Time Block and press .

To save the changes and return to the Time Blocks screen, select Save.

5.

- ▶ Update the End Times and Target Ranges for the remaining time blocks, as needed. See “Change End Time, Target Range Lower Value, and/or Target Range Upper Value” in this section.

5.16 Backlight Settings

The backlight on your Accu-Chek Aviva Combo Meter helps you read the information on the meter display under different lighting conditions. You can adjust the backlight level by pressing the backlight button on the front of the meter. The backlight adjusts from low, to medium, to high, and back to low again.



Backlight Button

Press to adjust the backlight level.

 **NOTE**

- When the meter is turned on, the backlight is set to medium.
- When the backlight is set to high or medium and no button activity has occurred for approximately 15 seconds, the meter goes to low backlight (to conserve battery life). The meter restores the original backlight setting when you press a button, insert a test strip, or when the meter displays the bG Results screen.
- When in the low battery condition, the meter uses the medium backlight level (if the backlight level is set to high). After the batteries are replaced with new ones, the meter again allows the high backlight setting.
- The backlight button is disabled during a blood glucose test, a control test, and when the meter is transferring data.

6 Icons, Reminders, Warnings, and Errors

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6.1 Overview

This chapter provides you with detailed listings of all the icons, reminders, warnings, and errors included in the meter.

 **NOTE**

Blood glucose and bG are interchangeable and mean the same thing.

6.2 List of Icons

The icons and icon names in the meter are:

Icon Name	Icon
Active Insulin	
Add Data	
Analyzing	
Beeper	
Blood Glucose Averages	
Blood Glucose Test	
Bluetooth Wireless Technology Enabled	
Bolus Advice	
Bolus Advice (Settings)	
Carbs	

Icon Name	Icon
Control Test	
Date	
Download (Data Transfer)	
Error	
Extended Bolus Not Confirmed	
Extended Bolus Confirmed	
Health	
Low Battery	
Meal Time	
Meter	

Icon Name	Icon
Meter (Settings)	
Multiwave Bolus Not Confirmed	
Multiwave Bolus Confirmed	
My Data	
Pen/Syringe Bolus	
Pump	
Reminder	
Reminders (Settings)	
Reports	
Settings	

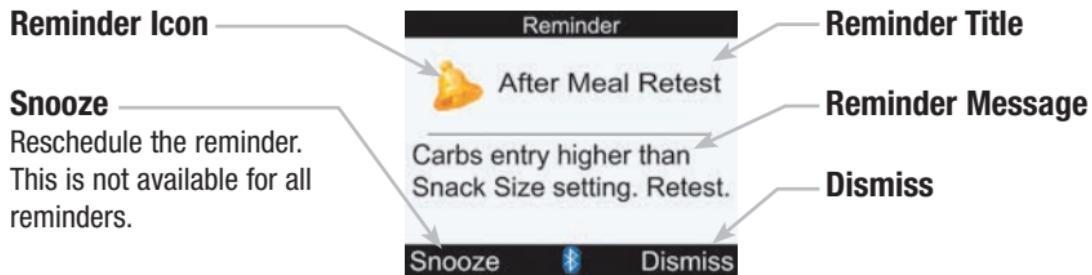
Icon Name	Icon
Sound/Vibrate (Settings)	
Standard Bolus Not Confirmed	
Standard Bolus Confirmed	
Time	
Time Block (Settings)	
Time Change	
Time/Date (Settings)	
Vibrate	
View Data	
Warning	

6.3 Confirming a Reminder, Warning, or Error

To confirm (or dismiss) most reminders or warnings, press . Some error messages require a different confirmation, such as “Retest with new Strip” or “Replace batteries now.” To place some reminders in the snooze mode, press . See the following sections for more details on a specific reminder, warning, or error.

6.4 List of Reminders

Reminder Screen Example



NOTE

- The meter beeps when it displays any reminder if the beeper setting is on.
- The meter vibrates when it displays any of the following reminders if the vibrate setting is on: After Meal Retest, bG Test, High bG Retest, Low bG Retest, and Other.

For instructions on how to set up meter reminders, see Chapter 5, “Changing Meter Settings.” The reminders available on the meter are:

Reminder Title	Reminder Message	Left Soft Key	Right Soft Key	Snooze Time
After Meal Retest	Carbs entry higher than Snack Size setting. Retest.	Snooze	Dismiss	5 minutes
bG Test	It is time for your scheduled bG test	Snooze	Dismiss	15 minutes
Dr. Visit Today	If the Dr. Visit time has been set: You have a Dr. Appointment today at (Settings Dr. Visit Time) ¹ Or, if the Dr. Visit time has not been set: You have a Dr. Appointment today		Dismiss	

Reminder Title	Reminder Message	Left Soft Key	Right Soft Key	Snooze Time
Dr. Visit Tomorrow	<p>If the Dr. Visit time has been set: You have a Dr. Appointment tomorrow at (Settings Dr. Visit Time)¹</p> <p>Or, if the Dr. Visit time has not been set: You have a Dr. Appointment tomorrow</p>		Dismiss	
High bG Retest	High bG Result on last test. Retest.	Snooze	Dismiss	15 minutes
Infusion Set Change	It is time to change your Infusion Set	Snooze	Dismiss	Displayed the next time the meter is powered-on

Reminder Title	Reminder Message	Left Soft Key	Right Soft Key	Snooze Time
Lab Test Today	<p>If the lab test time has been set: You have a Lab Test today at (Settings Lab Test Time)¹</p> <p>Or, if the lab test time has not been set: You have a Lab Test today</p>		Dismiss	
Lab Test Tomorrow	<p>If the lab test time has been set: You have a Lab Test tomorrow at (Settings Lab Test Time)¹</p> <p>Or, if the lab test time has not been set: You have a Lab Test tomorrow</p>		Dismiss	
Low bG Retest	Low bG Result on last test. Retest.	Snooze	Dismiss	5 minutes
Other	It is time for your Other activity	Snooze	Dismiss	15 minutes

¹If set, the time of the Dr. Visit or the Lab Test is displayed on the screen.

Reminders: Important Information

- When two or more event reminders occur at the same time, the meter displays the event reminder with the highest priority first:
 1. bG Test Reminders (After High bG, After Low bG, and After Meal)
 2. Alarm Clock Reminders (bG Test and Other)
 3. Date Reminders (Dr. Visit, Lab Test, and Infusion Set Change)

The following occur when the particular reminder is enabled and scheduled:

Dr. Visit Today, Dr. Visit Tomorrow, Lab Test Today, and Lab Test Tomorrow Reminders

- Displayed when you turn on the meter and a test strip has not been inserted.
- Dismiss the reminder either by pressing  or by inserting a test strip.

Infusion Set Change Reminder

- Displayed when you turn on the meter and a test strip has not been inserted.
- Dismiss the reminder by pressing .
- Snooze the reminder either by pressing  or by inserting a test strip.

Low bG Retest Reminder

- When your blood glucose test result is less than the low blood glucose threshold setting you have set up (see Chapter 5, “Changing Meter Settings”), then the meter schedules a Low bG Retest reminder for the time duration you have set up. The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 5 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any Low bG Retest reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

High bG Retest Reminder

- When your blood glucose test result is greater than the high blood glucose threshold setting you have set up (see Chapter 5, “Changing Meter Settings”), then the meter schedules a High bG Retest reminder for the time duration you have set up. The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 15 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any High bG Retest reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

After Meal Reminder

- When you enter carbohydrates into the diary through one of the following screens and the carbohydrates entered are greater than the Snack Size setting, then the meter schedules an After Meal reminder for the time duration you have set up (see Chapter 5, “Changing Meter Settings”). The meter maintains the duration of this scheduled reminder regardless of meter time and date changes.
 - Add Data screen (see Chapter 4, “Managing Your Data”)
 - Modify Data screen (see Chapter 4, “Managing Your Data”)
 - Detailed bG Result screen (see Chapter 2, “Testing Your Blood Glucose”)
 - Bolus Advice screen (see the Advanced Owner’s Booklet)
- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- When the meter displays the reminder and you do not press any meter buttons within 30 seconds, the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.
- Dismiss the reminder by pressing .
- Snooze the reminder for 5 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any After Meal reminders pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose test result.

Alarm Clock Reminders for bG Test and Other

- At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted).
- When the meter displays an Alarm Clock reminder and you do not press any meter buttons, after 30 seconds the meter turns off and displays the reminder again in 2 minutes. After the fourth time the meter displays the reminder, then the meter dismisses the reminder.

• bG Test Alarm Clock Reminder

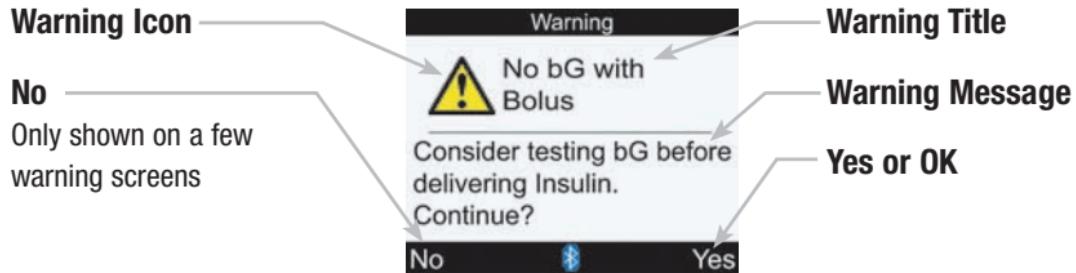
- If the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- Dismiss all active bG Test reminders by pressing .
- Snooze the reminder for 15 minutes either by pressing  or by inserting a test strip.
- When you perform a blood glucose test, the meter dismisses any bG Test reminders that have been snoozed or that are pending within the next 30 minutes.

- **Other Alarm Clock Reminder**

- If the meter is already on when the reminder is scheduled, the reminder is displayed when the meter powers down.
- Dismiss this reminder either by pressing  or by inserting a test strip.
- Snooze the reminder for 15 minutes by pressing .

6.5 List of Warnings

Warning Screen Example



NOTE

The meter beeps when it displays a warning if the beeper setting is on.

The warnings the meter may display are:

Warning Title	Warning Message	Left Soft Key	Right Soft Key
Above Hyper Warning Limit	Consider checking for ketones, bG and insulin regularly		OK
Beep/Vibrate Off	Beep and Vibrate settings cannot both be turned off at same time		OK
Below Hypo Warning Limit	Eat fast carbs of at least (number of carbs) ¹ Retest bG		OK
Bolus Advice	Bolus Advice data deleted		OK
Bolus Advice Not Setup	Advice not provided unless setup through Bolus Advice in Settings		OK
Bolus Advice Timeout	Bolus Advice no longer possible for this bG result		OK
Bolus Delivery Unavailable	Communication lost. Retry or set to Manual Pump.		OK
Bolus Delivery Unavailable	Pump unable to start Bolus. See Pump.		OK
Bolus Delivery Unavailable	Pump currently in Stop mode		OK

Warning Title	Warning Message	Left Soft Key	Right Soft Key
Bolus Too High	Bolus above allowed amount. Bolus set to maximum.		OK
Bolus Too Low	Bolus below allowed amount. Bolus set to minimum.		OK
Calculation Out of Range	No Bolus Advice available		OK
Carbohydrate Ratio	Carb Ratio seems unusual. Check entries.		OK
Code Key Missing	Turn off Meter and insert valid Code Key ²		OK
Communication Lost	See Pump		OK
Communication Warning	Pump data not available, Active Insulin may not be accurate		OK
Communication Warning	Pump data not available, recent Bolus data may not be accurate		OK
Connection Lost	Ensure Pump is within range of Meter		OK

Warning Title	Warning Message	Left Soft Key	Right Soft Key
Connection Lost	Restart Meter, select “Settings”, “Meter”, “Pair with Pump”		OK
Corrupt Language	Choose another language		OK
Diary Entry Used For Advice	Diary entry used for Advice, modifications not allowed		OK
Diary Results Expired	New data cannot be saved with this record		OK
HI bG Warning	Consider checking bG, ketones and insulin		OK
Incorrect Pump Time/Date	Pump time/date incorrect. Set time/date on the Pump. ³		OK
Infrequent Pump Communication	Two weeks since last communication with Pump		OK
Insulin Sensitivity	Insulin Sensitivity seems unusual. Check entries.		OK
Invalid Active Insulin	Unable to calculate the Active Insulin. Bolus Advice not available.		OK
Invalid Bolus Advice Times	Acting time must be greater than or equal to offset time		OK

Warning Title	Warning Message	Left Soft Key	Right Soft Key
Invalid Date	Reenter valid date		OK
Invalid Hyper Values	Hyper value must be greater than Time Block target ranges		OK
Invalid Hypo Values	Hypo value must be less than Time Block target ranges		OK
Invalid PIN	Reenter PIN shown on Pump display		OK
Invalid Record Time/Date	Record time/date must be older than the current meter time/date		OK
Invalid Target Range	Lower target range value above upper target range value		OK
Invalid Target Range	Range selected conflicts with Hyper and/or Hypo Warning Limit settings		OK
LO bG Warning	Retest bG. Contact your doctor.		OK
Meter and Pump Not Paired	Pair with Pump to use this feature		OK
Meter Battery Low	Replace soon. No Pump connection.		OK

Warning Title	Warning Message	Left Soft Key	Right Soft Key
No bG with Bolus	Consider testing bG before delivering Insulin. Continue?	No	Yes
Pairing Failed	Restart Meter, select “Settings”, “Meter”, “Pair with Pump”		OK
Pump Not Available	Ensure <i>Bluetooth</i> is on and Pump is within range of Meter		OK
Test Strips Expiring	Change Code Key and Strips soon ²		OK
Time Mismatch	Meter time has been changed by more than 5 minutes to match Pump		OK

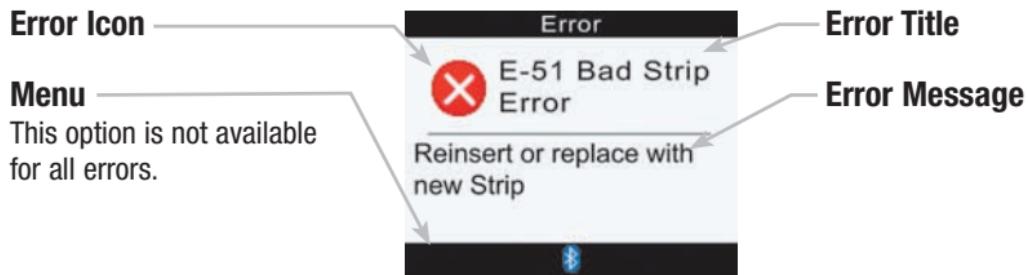
¹The meter displays a recommended amount of fast carbohydrates.

²On the meter display, the activation chip is referred to as a code key. Code key and activation chip are interchangeable and mean the same thing. If you need an activation chip, please contact Roche.

³The meter keeps its current date and time. The meter turns off *Bluetooth* wireless technology communication for this session.

6.6 List of Errors

Error Screen Example



NOTE

The meter beeps when it displays an error, even if the beeper setting is turned off.

The errors the meter may display are:

Error Title	Error Message	Left Soft Key	Right Soft Key
E-51 Bad Strip Error	Reinsert or replace with new Strip		
E-52 Code Key Error	Turn Meter off, reinsert or replace Code Key ¹	Menu ²	OK ³
E-53 Bad Test Error	Retest with new Strip		
E-54 Not Enough Sample	Retest with new Strip		
E-55 Code Key Expired	Turn Meter off, replace Code Key and Strips ¹	Menu ²	OK ³
E-56 Sample Applied Early	Retest with new Strip		
E-57 Electronic Error	Remove batteries, wait 20 seconds, replace batteries		
E-58 Temp. Error	Move Meter to correct temperature and wait 5 minutes	Menu ⁴	OK ⁴

Error Title	Error Message	Left Soft Key	Right Soft Key
E-59 Battery Empty	Replace batteries now		
E-60 Time/Date Error	Correct time/date if necessary	Menu	

¹ On the meter display, the activation chip is referred to as a code key. Code key and activation chip are interchangeable and mean the same thing. If you need an activation chip, please contact Roche.

² “Menu” is only displayed when the meter is in a bG test screen.

³ “OK” is only displayed after the Splash screen (Accu-Chek logo screen).

⁴ If the meter is powering up, then “OK” is displayed above the right soft key and “Menu” is not displayed above the left soft key.

7 Care and Maintenance

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7.1 Overview

It is important to properly care for and maintain your Accu-Chek Aviva Combo Meter. If you have any questions about the care and maintenance of your meter, contact Roche.

7.2 Changing the Batteries

1.



- ▶ Remove the battery door from the back of the meter by pushing the tab in the direction of the arrow and pulling up the door.

2.



- ▶ Remove the old batteries from the meter.
- ▶ Insert three AAA batteries with the + and - ends matching the marks in the battery compartment.

3.



- ▶ Put the battery door back in place and snap it closed.



WARNING

- Using batteries other than those supplied or recommended for use with the meter may significantly reduce the life of the batteries. Batteries other than those recommended may leak and corrode the battery contacts within the meter. Using batteries not supplied or recommended may void the warranty.
- Replace all batteries of a set at the same time. Newly purchased batteries should not be mixed with partially exhausted ones. Batteries of different electrochemical systems, grades, or brands should not be mixed. Failure to observe these precautions may result in some batteries in a set being driven beyond their normal exhaustion point and thus increase the probability of leakage.

 **NOTE**

- Alkaline batteries are recommended for use with the meter.
- After you change the batteries, the meter prompts you to confirm the time and date settings.
- It is a good idea to have spare, packaged batteries available.
- All test results, diary information, and settings are saved in the meter memory when the batteries are replaced.
- The meter remains paired with the pump when you remove and replace the batteries.
- Rechargeable batteries may be used in the meter. However, rechargeable batteries may not maintain the same battery life as non-rechargeable batteries.
- When the Low Battery warning appears:
 - *Bluetooth* wireless technology communication is disabled.
 - If vibrate is set to On, it is disabled until the batteries are replaced.
 - If the backlight level is set to high, the medium backlight level is used until the batteries are replaced.
 - If the beeper level is set to high, the medium beeper level is used until the batteries are replaced.

7.3 Power-Saving Tips

To conserve battery life:

- Use the low beeper setting
- Only turn on the vibration feature when it is needed
- Turn off the meter when you are finished rather than utilizing the auto power off feature

7.4 Cleaning the Meter

Caring for the meter is easy: just keep it free of dust. If you need to clean it, follow these guidelines carefully to help you get the best performance possible:

- Ensure the meter is off
- Gently wipe the meter's surface with a soft cloth slightly dampened with one of these cleaning solutions:
 - 70 % isopropyl alcohol
 - Mild dishwashing liquid mixed with water
 - 10 % household bleach solution (1 part bleach plus 9 parts water) made the same day
- Squeeze out any excess liquid from the cloth before you wipe the meter surface
- Get any moisture in the activation chip slot or test strip slot
- Spray any cleaning solution directly onto the meter
- Put the meter under water or liquid
- Pour liquid into the meter

For instructions on how to clean the pump, see the Accu-Chek Spirit Combo Insulin Pump User Guide.

7.5 Maintenance and Testing

- The meter needs little or no maintenance with normal use. It automatically tests its own systems every time you turn it on and lets you know if something is wrong. For detailed information on troubleshooting the meter, see Chapter 8, “Troubleshooting.”
- If you drop the meter or think it is not giving accurate results, ensure your test strips and control solution have not expired, and then perform a control test.
- Perform a control test with each new vial of test strips.
- To test the meter display, turn off the meter, and then press and hold ①. The display cycles through colours (red, blue, green, and white). If any part of the display does not change colours, contact Roche.
- If the meter is not working properly, contact Roche.

8 Troubleshooting

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8.1 Overview

For most problems, the meter displays a message with a short description of the symptom and, along with it, a proposed solution. This chapter goes into more detail by describing the symptom, the possible cause, and the possible solution. If the possible solutions do not fix the problem, contact Roche.

WARNING

Never make treatment decisions based on a warning or error message. If you have any concerns, contact Roche.

NOTE

- If you drop the meter or think it is not giving accurate results, make sure your test strips and control solution have not expired, and then perform a control test. For further assistance, contact Roche.
- Blood glucose and bG are interchangeable and mean the same thing.

8.2 Troubleshooting the Accu-Chek Aviva Combo Meter

Display Shows	Possible Cause(s)	Possible Solution(s)
The display is blank or the meter will not turn on.	<ul style="list-style-type: none"> ▶ Batteries are dead. ▶ Display is damaged. ▶ Meter is defective. ▶ Extreme temperature – the temperature is outside the meter operating range. 	<ul style="list-style-type: none"> ▶ Install new batteries. See Chapter 7, “Care and Maintenance.” ▶ Contact Roche. ▶ Contact Roche. ▶ Move the meter to an area with proper temperature. Wait five minutes before turning on the meter. Do not artificially heat or cool the meter.
 Bluetooth icon flashing	<ul style="list-style-type: none"> ▶ Communication ended due to a button press on the pump. ▶ Meter and pump are outside of communication range. 	<ul style="list-style-type: none"> ▶ Check the pump and continue operation of the pump manually. ▶ Ensure the pump has <i>Bluetooth</i> wireless technology turned on. ▶ Ensure pump is within communication range.

Display Shows	Possible Cause(s)	Possible Solution(s)
Above Hyper Warning Limit	<ul style="list-style-type: none"> ▶ Your test result is above the hyper warning limit set in the meter. 	<ul style="list-style-type: none"> ▶ Treat your high blood glucose as recommended by your healthcare professional. ▶ Consider checking bG, ketones, and insulin. ▶ See the pump User Guide for additional solutions.
Beep/Vibrate Off	<ul style="list-style-type: none"> ▶ Beep and Vibrate settings cannot be turned off at the same time. 	<ul style="list-style-type: none"> ▶ Ensure that either the Beep or Vibrate setting is turned on. See Chapter 5, “Changing Meter Settings.”
Below Hypo Warning Limit	<ul style="list-style-type: none"> ▶ Your test result is below the hypo warning limit set in the meter. 	<ul style="list-style-type: none"> ▶ Treat your low blood glucose as recommended by your healthcare professional. ▶ The meter displays a recommended number of carbohydrates for you to eat, and then retest your blood glucose.
Bolus Advice Bolus Advice data deleted	<ul style="list-style-type: none"> ▶ Bolus advice data integrity cannot be confirmed. 	<ul style="list-style-type: none"> ▶ Wait 8 hours for accurate bolus advice.
IMPORTANT: <ul style="list-style-type: none"> • Insulin doses and meals taken before the Bolus Advice warning are no longer reflected in the bolus advice calculation. • The meter may not reflect the pump bolus history, however the bolus history is available on the pump. 		

Display Shows	Possible Cause(s)	Possible Solution(s)
Bolus Advice Not Setup	<ul style="list-style-type: none"> ▶ Advice is not provided unless it is set up through Bolus Advice in Settings Menu. 	<ul style="list-style-type: none"> ▶ You can continue to use the meter without bolus advice or see Chapter 5, “Changing Meter Settings” for instructions on how to set up bolus advice.
Bolus Advice Timeout	<ul style="list-style-type: none"> ▶ Bolus advice is no longer available for this bG result. 	<ul style="list-style-type: none"> ▶ Review data that was saved in My Data. Then, decide to modify data, add data, or begin a new bolus advice session.
Bolus Delivery Unavailable	<ul style="list-style-type: none"> ▶ The meter cannot communicate with the pump. ▶ The pump is currently in Stop mode. ▶ The pump is currently delivering a bolus. 	<ul style="list-style-type: none"> ▶ Retry or set to Manual Pump. ▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on. ▶ Ensure the meter and pump are within communication range. ▶ If the low battery icon is displayed on the meter, the meter cannot communicate with the pump. Replace the batteries. ▶ Take the pump out of Stop mode. ▶ Allow the current bolus delivery to complete before delivering the next bolus.

Display Shows	Possible Cause(s)	Possible Solution(s)
Bolus Too High	▶ The bolus is above the allowed amount. The bolus was set to 50 Units.	▶ Check the accuracy of all entries. If necessary, contact your healthcare professional.
Bolus Too Low	▶ The insulin pump cannot deliver a 0.1 Unit of multiwave bolus.	▶ The pump will adjust the bolus to 0.2 Units.
Carbohydrate Ratio	▶ Carbohydrate ratio is outside of the acceptable meter range.	▶ Check your entries and contact your healthcare professional to determine the appropriate settings.
Code Key Missing	▶ The activation chip is not inserted.	▶ Turn the meter off and insert the activation chip. If you need an activation chip, please contact Roche.
Communication Lost	▶ Pump is out of range of the meter.	<ul style="list-style-type: none"> ▶ Bolus delivery continuing, see pump screen. ▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on. ▶ Ensure the meter and pump are within communication range. ▶ If the low battery icon is displayed on the meter, the meter cannot communicate with the pump. Replace the batteries. ▶ Use the pump to monitor or cancel a bolus which is in the process of being delivered.

Display Shows	Possible Cause(s)	Possible Solution(s)
Communication Warning	<ul style="list-style-type: none">▶ Communication of bolus data from the pump was not successful. Therefore, pump data are not available and the bolus data may not be accurate.▶ Communication of bolus data from the pump was not successful. Therefore, pump data are not available and the active insulin amount may not be accurate.	<ul style="list-style-type: none">▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on.▶ Ensure the meter and pump are within communication range.▶ If the low battery icon is displayed on the meter, the meter cannot communicate with the pump. Replace the batteries.

Display Shows	Possible Cause(s)	Possible Solution(s)
Connection Lost	<ul style="list-style-type: none"> ▶ The connection was lost between the meter and the pump during the pairing process. Therefore, the attempt to pair the meter and pump was unsuccessful. ▶ Pump is out of range of the meter. 	<ul style="list-style-type: none"> ▶ Restart the pairing process. See the Advanced Owner's Booklet. ▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on. ▶ Ensure the meter and pump are within communication range. ▶ If the low battery icon is displayed on the meter, the meter cannot communicate with the pump. Replace the batteries.
Diary Entry Used For Advice	<ul style="list-style-type: none"> ▶ The diary entry selected has been used for bolus advice and modifications are not allowed. 	<ul style="list-style-type: none"> ▶ Carefully confirm all information involving bolus advice. You cannot modify bolus advice related entries on the meter.
Diary Results Expired	<ul style="list-style-type: none"> ▶ Bolus advice is no longer available for this result. 	<ul style="list-style-type: none"> ▶ Review data that was saved in My Data. Then, decide to modify data, add data, or begin a new bolus advice session.

Display Shows	Possible Cause(s)	Possible Solution(s)
E-51 Bad Strip Error	<ul style="list-style-type: none"> ▶ Your blood glucose may be extremely low. 	<p>If you see this error message after you applied blood to the test strip:</p> <ul style="list-style-type: none"> ▶ If you are experiencing any of the common symptoms of low blood sugar, contact your healthcare professional immediately. ▶ Treat your low blood sugar as recommended by your healthcare professional. ▶ If this does not match how you feel, repeat the blood glucose test and see Chapter 2, “Testing Your Blood Glucose.”
	<ul style="list-style-type: none"> ▶ The test strip is damaged. ▶ The test strip is not properly inserted into the meter. 	<p>If you see this error message before you applied blood to the test strip:</p> <ul style="list-style-type: none"> ▶ Remove the test strip and reinsert it, or replace it if damaged. If the message reappears, contact Roche.
E-52 Code Key Error	<ul style="list-style-type: none"> ▶ The activation chip is incorrect. 	<ul style="list-style-type: none"> ▶ Please contact Roche.

Display Shows	Possible Cause(s)	Possible Solution(s)
E-53 Bad Test Error	<ul style="list-style-type: none"> ▶ A meter or test strip error has occurred. ▶ Your blood glucose may be extremely high. 	<ul style="list-style-type: none"> ▶ Discard the test strip and repeat the test. ▶ If this matches how you feel, contact your healthcare professional immediately. If it does not match how you feel, repeat the blood glucose test and see Chapter 2, “Testing Your Blood Glucose.” If this still does not match the way you feel, run a control test with your control solution and a new test strip. If the control result is within the acceptable range, review the proper testing procedure and repeat your blood glucose test with a new test strip. If the E-53 error still appears for your blood glucose test, your blood glucose test result may be extremely high and above the system’s reading range. Contact your healthcare professional immediately. If the control result is not within the acceptable range, see Chapter 3, “Control Testing.”

Display Shows	Possible Cause(s)	Possible Solution(s)
E-54 Not Enough Sample	<ul style="list-style-type: none"> ▶ Not enough blood or control solution was drawn into the test strip for measurement or was applied after the test has started. 	<ul style="list-style-type: none"> ▶ Discard the test strip and repeat the test.
E-55 Code Key Expired	<ul style="list-style-type: none"> ▶ The code key is from an expired lot of test strips. 	<ul style="list-style-type: none"> ▶ This message may appear when using a white activation chip in the meter. It means the test strips expire at the end of the current month. At the end of the month, discard the white activation chip and any remaining test strips. Insert a black activation chip. Make sure the time and date in the meter are correct. If you need a black activation chip, please contact Roche.
E-56 Sample Applied Early	<ul style="list-style-type: none"> ▶ Blood or control solution was applied to the test strip before the Apply Sample screen appeared on the display. 	<ul style="list-style-type: none"> ▶ Discard the test strip and repeat the test with a new test strip.
E-57 Electronic Error	<ul style="list-style-type: none"> ▶ An electronic error has occurred or, in rare cases, a used test strip was removed and reinserted. 	<ul style="list-style-type: none"> ▶ Turn off the meter and remove the batteries. Wait at least 30 seconds prior to reinserting the batteries. Turn on the meter and perform a blood glucose or control test. If the problem persists, contact Roche.

Display Shows	Possible Cause(s)	Possible Solution(s)
E-58 Temp. Error	<ul style="list-style-type: none"> ▶ The temperature is above or below the proper range for the meter. 	<ul style="list-style-type: none"> ▶ Move the meter to an area within the proper temperature range indicated for test strip use in the test strip package insert. Wait 5 minutes before turning on the meter. Repeat the test. Do not artificially heat or cool the meter.
E-59 Battery Empty	<ul style="list-style-type: none"> ▶ The batteries are extremely low. 	<ul style="list-style-type: none"> ▶ Insert new batteries. See Chapter 7, “Care and Maintenance.”
E-60 Time/Date Error	<ul style="list-style-type: none"> ▶ The time and date settings may be incorrect. ▶ You have changed the batteries. 	<ul style="list-style-type: none"> ▶ Ensure the time and date are correct and adjust, if necessary. See Chapter 5, “Changing Meter Settings.”
HI bG Warning	<ul style="list-style-type: none"> ▶ Your blood glucose may be higher than the measuring range of the system. 	<ul style="list-style-type: none"> ▶ If you are experiencing any of the common symptoms of high blood glucose, contact your healthcare professional immediately. ▶ Treat your high blood glucose as recommended by your healthcare professional. ▶ Consider checking bG, ketones, and insulin. ▶ See the pump User Guide for additional solutions.
Incorrect Pump Time/Date	<ul style="list-style-type: none"> ▶ Pump time/date incorrect. 	<ul style="list-style-type: none"> ▶ Set time/date on the pump (see pump User Guide).

Display Shows	Possible Cause(s)	Possible Solution(s)
Infrequent Pump Communication	<ul style="list-style-type: none"> ▶ At least 2 weeks have passed since the meter and pump have communicated. 	<ul style="list-style-type: none"> ▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on. ▶ Ensure the meter and pump are within communication range. ▶ If the low battery icon is displayed on the meter, the meter cannot communicate with the pump. Replace the batteries. ▶ It is important to use <i>Bluetooth</i> wireless technology communication between the meter and pump regularly if you utilize bolus advice.
Insulin Sensitivity	<ul style="list-style-type: none"> ▶ Insulin sensitivity is outside of the acceptable meter range. 	<ul style="list-style-type: none"> ▶ Check your entries and contact your healthcare professional to determine the appropriate settings.
Invalid Bolus Advice Times	<ul style="list-style-type: none"> ▶ The acting time value is less than the offset time. 	<ul style="list-style-type: none"> ▶ The acting time value must be set equal to or greater than the offset time. Reset the acting time value or revise the offset time.
Invalid Date	<ul style="list-style-type: none"> ▶ The date entered is invalid (dates for reminders cannot be set to occur in the past). 	<ul style="list-style-type: none"> ▶ Re-enter date.

Display Shows	Possible Cause(s)	Possible Solution(s)
Invalid Hyper Values	<ul style="list-style-type: none"> ▶ The hyper warning limit value must be greater than all of your target ranges in the time block settings. 	<ul style="list-style-type: none"> ▶ Reset the hyper warning limit or revise the target ranges in time blocks and re-enter the hyper warning limit. ▶ Enter a hyper warning limit that is above the target ranges of your time blocks. See Chapter 5, “Changing Meter Settings.”
Invalid Hypo Values	<ul style="list-style-type: none"> ▶ The hypo warning limit value must be less than all of your target ranges in the time block settings. 	<ul style="list-style-type: none"> ▶ Reset the hypo warning limit or revise the target ranges in time blocks and re-enter the hypo warning limit. ▶ Enter a hypo warning limit that is below the target ranges of your time blocks. See Chapter 5, “Changing Meter Settings.”
Invalid PIN	<ul style="list-style-type: none"> ▶ The wrong PIN was entered. 	<ul style="list-style-type: none"> ▶ Select OK and re-enter the PIN shown on the pump display.
Invalid Record Time/Date	<ul style="list-style-type: none"> ▶ The time/date entered is invalid (Add Data entries cannot be set to occur in the future). 	<ul style="list-style-type: none"> ▶ Re-enter time/date.

Display Shows	Possible Cause(s)	Possible Solution(s)
Invalid Target Range	▶ The lower target range value is above the upper target range value.	▶ Reset the target range values. ▶ Enter the correct lower target range value and upper target range value. See Chapter 5, “Changing Meter Settings.”
	▶ The range selected conflicts with your hyper and/or hypo warning limit settings.	▶ Reset range or revise warning limit settings and re-enter range. ▶ Enter the correct lower target range value and upper target range value. See Chapter 5, “Changing Meter Settings.”
LO bG Warning	▶ Your blood glucose may be lower than the measuring range of the system.	▶ Treat your low blood glucose as recommended by your healthcare professional. ▶ If you are experiencing any of the common symptoms of low blood glucose, contact your healthcare professional immediately.
Meter and Pump Not Paired	▶ Meter and pump have not been paired. You cannot use the pump functions without pairing the meter and the pump.	▶ You must pair the meter and pump to use these features. ▶ For instructions on how to pair the meter and pump, see the Advanced Owner’s Booklet.
Meter Battery Low	▶ Battery power is low.	▶ Install new batteries. See Chapter 7, “Care and Maintenance.”

Display Shows	Possible Cause(s)	Possible Solution(s)
No bG with Bolus	<ul style="list-style-type: none"> ▶ You have not tested your bG and are attempting to deliver a bolus. 	<ul style="list-style-type: none"> ▶ It is recommended to test bG before delivering insulin.
Pairing Failed	<ul style="list-style-type: none"> ▶ The attempt to pair the meter and pump was unsuccessful. 	<ul style="list-style-type: none"> ▶ Restart the pairing process. See the Advanced Owner's Booklet.
Pump Not Available	<ul style="list-style-type: none"> ▶ The pump is out of the communication range of the meter. 	<ul style="list-style-type: none"> ▶ Ensure the meter and pump have <i>Bluetooth</i> wireless technology turned on. ▶ Ensure the meter and pump are within communication range. ▶ If the low battery icon is displayed, the meter cannot communicate with the pump. Replace the batteries.

Display Shows	Possible Cause(s)	Possible Solution(s)
Test Strips Expiring	<ul style="list-style-type: none">The test strips expire at the end of the current month.	<ul style="list-style-type: none">This message may appear when using a white activation chip in the meter. It means the test strips expire at the end of the current month. At the end of the month, discard the white activation chip and any remaining test strips. Insert a black activation chip. Make sure the time and date in the meter are correct. If you need a black activation chip, please contact Roche.Ensure the time and date are correct and adjust, if necessary. See Chapter 5, “Changing Meter Settings.”
Time Mismatch	<ul style="list-style-type: none">The time or date on the meter is more than 5 minutes different than the time or date on the pump.	<ul style="list-style-type: none">The meter time and date were changed to match the pump time. Ensure the time and date are correct. If the time or date are not correct, change the time and date on the pump.

 **NOTE**

- For additional information on errors and warnings, see Chapter 6, “Icons, Reminders, Warnings, and Errors.”
- If you have a question or if you see any other error screen, please contact Roche.

9 Technical Information

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9.1 Overview

This chapter provides you with important performance information regarding the meter.

9.2 Product Limitations

Please read the literature packaged with your test strips to find the latest information on product specifications and limitations.

9.3 Specifications

Blood volume	► Refer to the test strip package insert.
Sample type	► Fresh whole blood
Measuring time	► Refer to the test strip package insert.
Measuring range	► Refer to the test strip package insert.
Test strip storage conditions	► Refer to the test strip package insert.
Meter storage conditions (with batteries inserted)	► -20 °C to 50 °C
System operating conditions	► Refer to the test strip package insert.
Relative humidity operating range	► Refer to the test strip package insert.
Memory capacity	► 1,000 diary records
Automatic power off	► 2 minutes

Power supply	► Three AAA batteries (recommended: alkaline)
Display	► LCD
Dimensions	► 94 x 55 x 25 mm LWH
Weight	► Approximately 103 g with batteries inserted
Construction	► Hand-held
Protection class	► III
Meter type	► The Accu-Chek Aviva Combo Meter is suitable for continuous operation.
Control solution storage conditions	► 2 °C to 32 °C
Interface	► IR; LED/IRED – Class 1

9.4 Product Safety Information

Bluetooth Wireless Technology

The meter and the pump utilize *Bluetooth* wireless technology to communicate and transfer information. *Bluetooth* wireless technology is a form of radio frequency (RF) technology that operates in the unlicensed industrial, scientific, and medical band at 2.4 to 2.485 GHz. The RF channel utilized for communication between the meter and the pump is not an open channel. The meter can only communicate with the pump it is paired with; therefore, other *Bluetooth* wireless technology devices (e.g., cell phone, printer, etc.) cannot be paired with, communicate with, or access your personal information on the meter or the pump.

Radio Frequency Communication

The device complies with the United States Federal Communications Commission (FCC) standards. The device complies with FCC Part 15 Rules. Operation of the device is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Compliance with these guidelines means that under normal, daily circumstances the device should not affect the operation of other devices. In addition, the device should operate normally in the presence of other devices.

In the event there is interference from another device, it is recommended that you increase distance between meter and that device. You may also turn off the interfering device. In addition, you may turn off *Bluetooth* wireless technology on the meter and deliver insulin directly using the pump.

Changes or modifications to the device not expressly approved by Roche could void the user's authority to operate the device.

The device has been tested and found to comply with the limits for a Class B digital device. The device generates, uses, and can radiate radio frequency energy.

Electromagnetic Compatibility

This meter meets the electromagnetic immunity requirements as per EN ISO 15197 Annex A. The chosen basis for electrostatic discharge immunity testing was basic standard IEC 61000-4-2. In addition, it meets the electromagnetic emissions requirements as per EN 61326. Its electromagnetic emission is thus low. Interference from the meter to other electrically driven equipment is not to be anticipated.

Performance Analysis

The performance data for the Accu-Chek Aviva Combo System (Accu-Chek Aviva Combo Meter with Accu-Chek Aviva Test Strips) were obtained using capillary blood from diabetic patients (method comparison, accuracy), venous blood (repeatability), and control solution (reproducibility). The system is calibrated with venous blood containing various levels of glucose. The reference values are obtained using the hexokinase method. For method comparison, the results were compared with results obtained using the hexokinase method with deproteinization (automatic analyzer). The hexokinase method is traceable to an NIST standard.

Measuring Principle

Refer to your test strip package insert for more information.



WARNING

- Strong electromagnetic fields may interfere with the proper operation of the meter. Do not use this meter close to sources of strong electromagnetic radiation.
- To avoid electrostatic discharge, do not use the meter in a very dry environment, especially one in which synthetic materials are present.

9.5 Disposing of the Meter

WARNING

- During blood glucose measurement, the meter itself may come into contact with blood. Used meters therefore carry a risk of infection. Dispose of your used meter, after removing the batteries, according to the regulations applicable in your country. For information about correct disposal, contact your local council and authority.
- The meter falls outside the scope of the European Directive 2002/96/EC - Directive on waste electrical and electronic equipment (WEEE).

9.6 Guarantee

The statutory provisions on rights in consumer goods sales in the country of purchase shall apply.

9.7 Additional Supplies

The following supplies and accessories are available from your authorized Roche Diabetes Healthcare Centre, pharmacies, or your medical/surgical supply dealer:

Test Strips

Accu-Chek Aviva Test Strips

Control Solutions

Accu-Chek Aviva Control Solutions

9.8 Information for Healthcare Professionals



WARNING

Healthcare Professionals: Follow the infection control procedures appropriate for your facility.

A drop of fresh, whole blood is required to perform a blood glucose test. Refer to the test strip package insert for additional healthcare professional information.

Appendices

Appendix A: Abbreviations

Abbreviation	Definition
BE	Bread Equivalent (equal to 12 grams of carbohydrates)
bG	Blood Glucose
°C	Degrees Celsius (or Centigrade)
Carbs	Carbohydrates
CC	Carbohydrate Choice (equal to 15 grams of carbohydrates)
FCC	Federal Communications Commission (United States)
g	Grams
GHz	Gigahertz
Hyper	Hyperglycaemia (high blood glucose)
Hypo	Hypoglycaemia (low blood glucose)
IC	Industry Canada

Abbreviation	Definition
IR	Infrared
ISO	International Organization for Standardization
KE	Kohlenhydrateinheit (equal to 10 grams of carbohydrates)
LCD	Liquid Crystal Display
mmol/L	Millimoles per Liter
N/A	Not Applicable
NIST	National Institute of Standards and Technology (United States)
PIN	Personal Identification Number
RF	Radio Frequency
SD	Standard Deviation
U	Units (bolus insulin units)

Appendix B: Carb Units

For carbohydrates, the following units of measure are available on the meter.

Abbreviation	Unit of Measurement	Gram Equivalent
g	Grams	1 gram
KE	Kohlenhydrateinheit	10 grams
BE	Bread Equivalent	12 grams
CC	Carbohydrate Choice	15 grams

Appendix C: Explanation of Symbols

You may encounter the following symbols on the packaging, on the type plate (back of meter), and in the instructions for the meter, shown here with their meaning.

	Consult instructions for use
	Caution, refer to safety-related notes in the instructions for use accompanying this product.
	A NOTE is used to provide additional information
	Temperature limitation (store at)
	Manufacturer
REF	Catalogue number
IVD	In vitro diagnostic medical device
	Blood glucose meter and test strips: These products fulfil the requirements of the European Directive 98/79/EC on in vitro diagnostic medical devices.
	1.5V AAA

Appendix D: Meter Settings and Range Limits

mmol/L

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Acting Time	hours:minutes	1:30	8:00	0:15	4:00
Active Insulin	Units	0	99.9	0.1	N/A
bG Threshold (High)	mmol/L	6.5	19.5	0.1	Hyper Warning Limit
bG Threshold (Low)	mmol/L	3	5.5	0.1	Hypo Warning Limit
Carb Ratio (carbs)	grams	1	240	1	No entry ("--- g")
	BE	0.1	20	0.1	No entry ("--- BE")
	KE	0.1	24	0.1	No entry ("--- KE")
	CC	0.1	16	0.1	No entry ("--- CC")
Carb Ratio (insulin)	Units	0.1	50	0.1	1
Carbohydrates	grams	0	240	1	No entry ("--- g")
	BE	0	20	0.1	No entry ("--- BE")
	KE	0	24	0.1	No entry ("--- KE")
	CC	0	16	0.1	No entry ("--- CC")

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Exercise 1 (health event)	%	-50	50	1	0
Exercise 2 (health event)	%	-50	50	1	0
Extended Bolus (insulin)	Units	0	501	0.1	N/A
Hyper Warning Limit	mmol/L	10	19.4	0.1	16.5
Hypo Warning Limit	mmol/L	3	5	0.1	4
Illness (health event)	%	-50	50	1	0
Insulin Sensitivity (bG)	mmol/L	0.1	55.4	0.1	No entry ("---mmol/L")
Insulin Sensitivity (insulin)	Units	0.1	50	0.1	1
Meal Rise (bG)	mmol/L	2.8	11.1	0.1	2.8
Multiwave Bolus (insulin)	Units	0.2	501	0.1	N/A

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Offset Time	hours:minutes	0:45	Acting Time	0:15	1:00
Premenstrual (health event)	%	-50	50	1	0
Snack Size (carbs)	grams	0	24	1	No entry ("--- g")
	BE	0	2	0.1	No entry ("--- BE")
	KE	0	2.4	0.1	No entry ("--- KE")
	CC	0	1.6	0.1	No entry ("--- CC")
Standard Bolus (insulin)	Units	0	50	0.1	N/A
Stress (health event)	%	-50	50	1	0
Target Range Upper Value	mmol/L	5.5	15	0.1	8
Target Range Lower Value	mmol/L	3	8	0.1	4

¹The maximum that can actually be delivered may be less due to the Accu-Chek Spirit Combo Pump's maximum insulin amount.

The following are the default settings for bG test reminders. To turn on a bG test reminder, see “Setting the Alarm Clock Reminders: bG Test, Other” in Chapter 5, “Changing Meter Settings.”

Test Reminder	Default Time of Day
1	07:00
2	09:00
3	11:00
4	12:00
5	14:00
6	16:00
7	19:00
8	22:00

The following are the default settings for the time blocks. Talk to your healthcare professional about setting up time blocks to help you manage your diabetes. To adjust the time blocks, see Chapter 5, “Changing Meter Settings.”

Time Block	24-Hour Format
1	0:00–5:30
2	5:30–11:00
3	11:00–17:00
4	17:00–21:30
5	21:30–0:00

Glossary

Term	Definition
7-day average	Includes results generated today and the previous 6 days.
Acting Time	The period of time from the start of the meal rise or the delivery of a correction bolus until your blood glucose level is expected to return to the target level.
Active Insulin	Bolus insulin that has been given to lower your blood glucose but has not yet been fully used.
Advice Options	Factors that influence bolus advice calculations including meal rise, snack size, acting time, and offset time.
After High bG Reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a high blood glucose test result.
After Low bG Reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a low blood glucose test result.
After Meal Reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a meal. For this reminder to occur, you must enter carbohydrate data greater than the snack size amount.
Alarm	Audible or vibrating (silent) notification indicating a reminder, warning, or error.

Term	Definition
bG Test Reminders	Reminders to retest your blood glucose after a high blood glucose test result, after a low blood glucose test result, or after a meal.
bG Threshold	A bG test reminder setting. The upper limit for your blood glucose for a high bG test reminder and the lower limit for your blood glucose for a low bG test reminder.
Blood Glucose (bG)	The level of sugar in blood.
<i>Bluetooth</i> Wireless Technology	Wireless short-range communications technology which connects devices (such as meter and pump) in order to exchange information.
Bolus	The delivery of insulin all at once rather than slowly throughout the day, usually used to compensate for meals or high blood glucose.
Bolus Advice	When enabled, bolus advice provides recommendations on the amount of insulin for food intake and for correcting blood glucose levels that are not within your target range.
Bolus Advice Options	See Advice Options.
Bolus Delivery Start Delay	The Standard Bolus icon blinks for 5 seconds and then the meter communicates to the pump to begin delivery of the bolus amount. During this delay you are able to cancel the bolus delivery by pressing ▲ or ▼. The meter beeps and returns to the Pump Run screen.

Term	Definition
Carb Ratio	The amount of insulin necessary to account for a certain number of carbohydrates.
Carbohydrates (or Carbs)	Carbohydrate foods include sugars and starches. Carbohydrates can raise blood glucose levels slowly or rapidly. Carbohydrates are generally counted to calculate a bolus insulin dose.
Caution	Provides information that, if not followed, could result in material hazards (damage to or destruction of equipment or materials).
Control Result	Value displayed on meter as the result of a control test. When the Control Result is within the range shown on the label of the test strip container, then the test strips and the meter are working properly.
Control Test	A meter test using control solution which lets you know that the meter and test strips are working properly.
Corrupt Result	bG test result that had an error.
Current Date	Refers to the date you set through the menu Settings and then the Time/ Date screen.
Current Time	Refers to the time you set through the menu Settings and then the Time/ Date screen.

Term	Definition
Day	Period of time starting at 00:00 and ending at 23:59.
End Time	The end time of a time block.
Extended Bolus	A bolus delivered over a period of time. It can be helpful during long meals or when you have meals that are digested slowly. The Extended Bolus may also be appropriate for people who have gastroparesis (delayed digestion). This option is available only when <i>Bluetooth</i> wireless technology is turned on and the meter and pump are communicating.
Health Events	A pop-up menu selection (fasting, exercise 1, stress, illness, exercise 2, or premenstrual) that allows information to be stored with a blood glucose test result or in a diary record and percentages that could adjust bolus advice recommendations for your current health status or activities.
HI	The test result is above the meter's measurement range.
Hyper	Hyperglycaemia: an abnormally high level of glucose in the blood.
Hyper Warning Limit	When your blood glucose test result is above the hyper warning limit, a warning is displayed.

Term	Definition
Hypo	Hypoglycaemia: an abnormally low level of glucose in the blood.
Hypo Warning Limit	When your blood glucose test result is below the hypo warning limit, a warning is displayed.
Insulin Pump	A device that delivers a continuous supply of insulin into the body.
Insulin Sensitivity	The amount of insulin necessary to lower your blood glucose by a certain amount.
Ketones	A by-product or waste product when your body burns stored fat for energy. Ketones are produced when there is not enough insulin to help your body use glucose for energy. Without enough insulin, glucose builds up in the blood.
Key Lock	A meter function which disables the keys (buttons) in order to prevent its unintended use.
LO	The test result is below the meter's measurement range.
Meal Rise	During or after meals, an increase in blood glucose levels is considered normal within a certain range, even though a meal bolus has been delivered. A meal rise is in effect for a specified time period.

Term	Definition
Meal Time	A pop-up menu selection (Pre Meal, Post Meal, Bedtime, or other) that allows information to be stored with a blood glucose test or in a diary record.
Meter	Blood glucose meter.
Multiwave Bolus	A bolus designed to better simulate the body's insulin delivery. It combines an immediate bolus delivery followed by an Extended Bolus delivery. A Multiwave Bolus can be helpful when you have meals that include both rapidly and slowly absorbed carbohydrates. This option is available only when <i>Bluetooth</i> wireless technology is turned on and the meter and pump are communicating.
Note	Additional information.
Offset Time	Offset time takes into account the expected delay for the blood glucose level to actually fall during the acting time of insulin in the body. It describes the first time period within the acting time.
Paired	A pump and meter exclusively communicating and transferring information with each other.
Pump	See Insulin Pump.

Term	Definition
Quick Bolus	A bolus delivery on the pump using the pump UP and DOWN keys. One key press equals one bolus increment (i.e., 0.1, 0.2, 0.5, 1.0, 2.0). See the pump User Guide for more information.
Remind After	A bG test reminder setting. The amount of time after a high blood glucose test result, after a low blood glucose test result, or after a meal you want the reminder to occur.
Reminder	When enabled, reminders occur to remind you to test your blood glucose, to retest your blood glucose or of an event or activity.
Snack Size	The amount of carbohydrates that should not be counted as a regular meal with the expected meal rise.
Snooze	Delay of some reminders for a defined time period.
Soft Keys	Two buttons under the meter display used to navigate through the user interface. Just above each soft key, the meter display shows the selection (i.e., Save, Cancel, Back, etc.).
Standard Deviation	As it is used in this owner's booklet, standard deviation measures how widely spread the bG test results are (e.g., if the bG test results are close to the bG average, then the standard deviation is small).

Term	Definition
Standard Bolus	A bolus that is immediately delivered to cover a food or a blood glucose correction. When Standard is selected, the bolus is delivered by the pump. This option is available only when <i>Bluetooth</i> wireless technology is turned on and the meter and pump are communicating.
Start Time	The start time of a time block.
Target Range	The desired upper and lower limits of your blood glucose level considered acceptable as set by your healthcare professional.
Time Blocks	Up to eight time periods within one day to facilitate your changing insulin needs throughout the day.
Time Range	The user sets the duration of time. There is a start and end time.
User	A person using the meter or pump.
Warning	Describes items and conditions that present hazards and may cause personal injury.
Warning Limits	See Hyper Warning Limit or Hypo Warning Limit.

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